

EDGE

DREAMCAST ■ PLAYSTATION ■ NINTENDO 64 ■ PC ■ ARCADE ■ ONLINE

Colin McRae Rally 2

Codemasters' V-Rally 2 killer kicks up dust

PlayStation 2 powers up

Sony's superconsole developments exposed



Reviewed

Metal Gear Solid: Integral

Dino Crisis | G-Police 2

Buggy Heat



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There is a danger that discerning gameheads missed last month's issue because some less-than-switched-on newsagent employees took one look at the gorgeous Ferrari 355 render that adorned its cover and promptly stacked it among the motoring titles on their shelves.

The quality of today's CGI perhaps renders confusion inevitable. But this is a serious issue. Why else do you think videogaming has become so popular? Why is it now a multibillion-dollar industry when it was once such a niche market? Why does the mainstream lifestyle press, almost without exception, now feature sections dedicated to videogames? It's certainly not because today's games play any better than many of those of the early '90s.

No, it's simply because they look better. The people who've made videogaming a cultural phenomenon wouldn't have even touched an Amiga, SNES or Mega Drive during their heyday, because they just could not relate to what was being represented onscreen. With the advent of the PlayStation, however, suddenly cars in driving games carried some semblance of reality. The layman no longer had to use so much imagination. Where once he passed over 2D sprites because of their abstract nature, he became faced with components whose existence made a new sort of sense, be it the female form in Lara or the world of motor sports in the touring cars of *TOCA*. The door of wide-scale marketability duly opened.

Videogaming is fantasy. But the journey towards representing reality has turned it on its head in recent years.

Apologies if you had any difficulty locating this issue at your newsagent.



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Colour reproduction

Colourworks Repro, Bristol

Phoenix Repro, Bath

Print

Cradley Print, Warley,

West Midlands

Edge is printed on Royal Press

90gsm

Production of Edge

Hardware Power Macintosh, G3,

PowerBook, Quadra by Apple

Software QuarkXPress, Adobe

Photoshop, Macromedia FreeHand,

Pixar Typestry and Nisus Writer

Typography (Adobe®)

Formata light/regular/medium/bold

Vectoria light/bold/black Base125ons/

bold/Univers Ultra Condensed

Fifth colours: Pantone®

Color B220 / Sections B260

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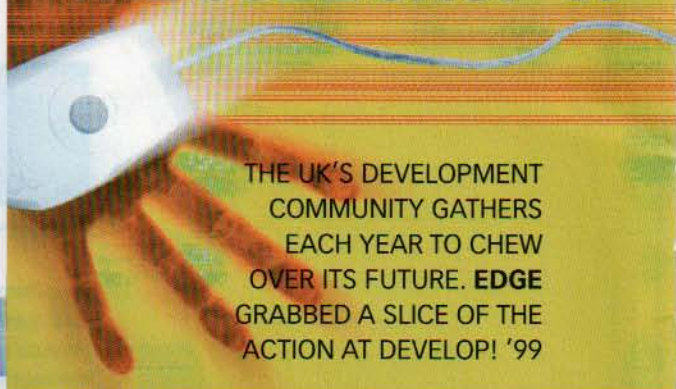
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BITS AND PIECES 68



Behind the scenes of the videogame TV show you love to hate

THE CODE SHOP 60



THE UK'S DEVELOPMENT COMMUNITY GATHERS EACH YEAR TO CHEW OVER ITS FUTURE. EDGE GRABBED A SLICE OF THE ACTION AT DEVELOP! '99

COLIN MCRAE RALLY 2 44

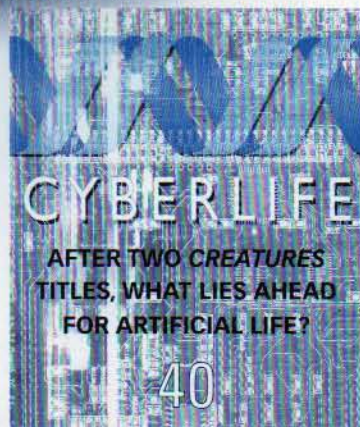
THE CREAM OF CODEMASTERS' CROP TAKEN FOR A SPIN



What has moviedom got to give videogames? Edge investigates

HOORAY FOR HOLLYWOOD

52



CYBERLIFE

AFTER TWO CREATURES TITLES, WHAT LIES AHEAD FOR ARTIFICIAL LIFE?

40

TESTSCREEN

The planet's most honest, accurate videogame reviews

DINO CRISIS



76

KINGPIN



80

DRIVER



84

MGS: INTEGRAL



85

BUGGY HEAT



86

QUAKE II



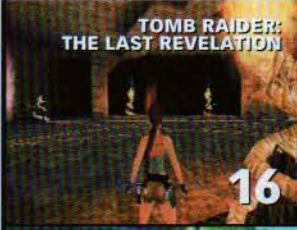
88

Dino Crisis	76
G-Police 2	78
Kingpin	80
TA: Kingdoms	82
Driver	84
Metal Gear Solid: Integral	85
Buggy Heat	86
Shutokou Battle	87
Quake II	88

PRESCREENS 13

New images from *Wipeout 3*, *Donkey Kong 64* and *Res Evil: Nemesis* in Alphas; *Prince Naseem Boxing* and *Urban Chaos* previewed

TOMB RAIDER:
THE LAST REVELATION



16

VAGRANT STORY



24

JET FORCE GEMINI

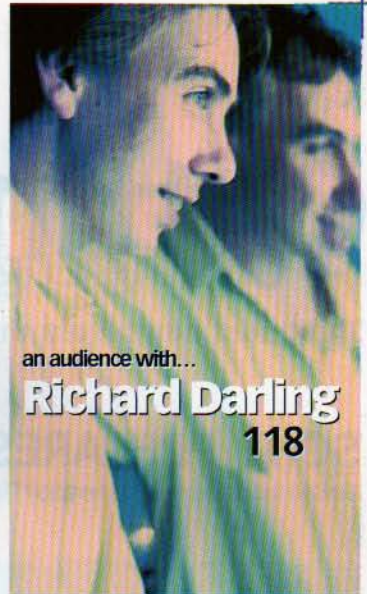


22



Virtua Striker 2 v2000 31

Having established a superbrand with its Model 3-powered *Striker* series, Sega is back with the latest, more modestly specced update. **Edge** meets with the game's director



an audience with...

Richard Darling
118

06 News

Kessen shots show off Sony's next-generation potential; PAL Dreamcast confirms slow-down fears; Games industry prepares for Oscars

13 Prescreen

Shao Lin, *The Nomad Soul* and *F1 '99* in Alphas; plus *Chrono Cross*, *Dew Prism*, *Rogue Spear* and *Creatures Adventures*

75 Testscreen

Thrills and spills in *Dino Crisis*, *Kingpin* and *Driver*; while *Metal Gear Solid: Integral*, *G-Police 2* and *TA: Kingdoms* bring up the rear

89 Edge Moves

Your chance to be a part of the videogame industry

106 Develop

Demis Hassabis and Rockstar Games continue their exclusive diaries, and **Edge** is treated to a peek behind the scenes at Mucky Foot

118 Audience With

Codemasters' driving force, Richard Darling

124 Arcadeview

Edge testdrives Yu Suzuki's Ferrari F355 opus and Capcom's *Strider* makes a comeback

126 Retroview

Remembering gangland blood-bath *Final Fight*. Plus **EdgeView** and PixelPerfect

128 Out There

Consumer Tech, Reportage and Media

134 ViewPoint

138 Over the Edge

Cutting Edge

The latest news from the world of interactive entertainment

SONY PREPARES TO GO TO WAR

Kessen leads the next-generation PlayStation charge



Koei claims that *Kessen* will be able to handle around 300 cavalry simultaneously onscreen



Despite the NGPS's grunt, *Kessen* will carry FMV footage like this

Japanese publisher Koei has delivered the most tangible evidence yet of the real game potential of the next-generation PlayStation.

Kessen, a realtime feudal wargame, will be launched next year, sometime after Sony's machine hits Japanese retail in December – a date recently confirmed by company insiders.

The title was demonstrated to an expectant audience, which naturally included *Edge*, via a standard PlayStation

controller. And, despite its predictable content (for some years Koei's output has consisted of straight-laced strategy wargames), *Kessen* provided ample proof that Sony's new machine can muster up visuals that surpass anything ever seen in the home by a significant margin.

Although the demo version showed only 50 or so horse-riding soldiers, Koei president **Yoichi Erikawa** claimed that the finished game will be able to handle six times that amount



Koei is working on four NGPS titles, but Kessen, whose development budget is set at around \$4m, will launch first

simultaneously onscreen, going on to relate that the title "is the realisation of a dream I have had for 20 years."

The west is waiting

One source claims that over 1,000 next-generation PlayStation dev kits have been introduced to Japanese developers, and yet only publishers Rage and Acclaim are known to be working with the technology in the UK, along with various companies working on middleware components.

"You can bet that, like us, most companies are developing their PlayStation 2 games on high-end PCs in readiness for hardware availability," revealed one leading UK developer. "Dev kits will trickle through to the highest priority developers after the devcon in August, but I don't think 'regular' developers will see machines before the end of the year."

Intriguingly, the more Sony reveals about the new format, the more developers are getting worked into a lather, as another anonymous source disclosed to **Edge**: "The more I know about the format, the more impressed I am. This is a very powerful machine. The demos do not do it justice. The PC programmers coming over – the 'Texas mafia', etc – will not easily be able to cope with it because it looks so different to PC architecture. The skills required to program the system are reminiscent of the skills needed to program Spectrums and early game consoles, with small cache memories, a high reliance on DMAs, tight-coded assembler loops, inline coding, no libraries, little or no C code, etc – all of the skills England has in abundance but the US doesn't fare quite so well with."

"The early Japanese claims that only five companies in the world will be able to develop PS2 games are complete



As horses approach, the noise of their hooves becomes more audible. Shibusawa-san wants "to put more effort into representing the emotional aspects of humans." More FMV (top right)

"This is a very powerful machine. The demos do not do it justice. The skills required to program the system are reminiscent of skills needed to program Spectrums and early game consoles"

bullshit," another insider related. "Teams will not be three times the size of those working on existing PlayStation games."

Sony will make a big splash with its next-generation PlayStation at the Tokyo Game Show in September, although the company is eager not to be perceived as being at all bothered by the threat of Sega's Dreamcast, which has remained buoyant at retail since the Japanese price drop in May. **Edge** was not invited to a recent PlayStation conference in Los Angeles for this very reason.

Albeit slowly, Sony is drawing the new battle lines. **Edge** will speak to more NGPS devcos next month.

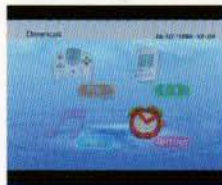


Now, *that's* a hat. Ornamental headgear is just one element that is about to be refined



PAL DREAMCAST ARRIVES AS SEGA RAMS MESSAGE HOME

Finally, 128bit console makes its UK debut at **Edge's** offices, while global marketing for the machine goes into overdrive



The letterbox effect so hated by Euro gamers courtesy of the PAL Dreamcast. Thankfully, some developers are already including the optional full-screen, full-speed 60Hz mode

Edge has taken delivery of one of the first PAL Dreamcasts in the UK, along with a selection of software samplers, including *Sega Rally 2*, *The House of the Dead 2*, and *Sonic Adventure*. And, as was initially feared, the unoptimised code results in a 17 per cent speed reduction, plus borders of at least 15mm top and bottom on a 300mm-deep television screen. (As **Edge** exclusively revealed last month, Sega is urging Dreamcast game developers to offer full-screen, full-speed 60Hz modes as options in software: Infogrames' *UEFA Striker* offers such a mode, with Acclaim's *Trick Style* thought to follow suit.)

The console itself remains physically unchanged, apart from the words 'Designed for Microsoft Windows CE' that appears on the front of the Japanese

model having been replaced by 'Compatible with Microsoft's Windows CE' on the PAL unit.

Sega has made a slight alteration to the joypad design, however: the D-pad is raised more than that of the Japanese version, resulting in further 'throw', which will go some way towards appeasing the critics who'd found the original Dreamcast joypads to be almost unusable for titles such as *Street Fighter Zero 3*.

Sega has made a slight alteration to the PAL joypad design: the D-pad is raised more than that of the Japanese version, resulting in further 'throw', which will go some way towards appeasing the critics

Edge's unit did not arrive replete with modern, however. Sega will not be making these units available to the press until September.

However, it has transpired that when the PAL system is ready to go online, Sega's new *Dream Passport 2* software will be more capable than was initially intimated. The code was shipped free to Japanese owners on August 5, and offers compatibility with Flash- and Java-enhanced Websites. It also allows users to set up screening procedures to restrict access to adult content, although it is not yet clear how this is implemented.

Light launch

Much speculation still surrounds Sega's initial software launch line-up, although an inside source revealed to **Edge** that the game plan involves making three titles (*Sega Rally 2*, *Virtua Fighter 3tb* and *Toy Commander*) available immediately at launch, with at least one game following every week thereafter (the first batch arriving in this order, tentatively: *The House of the Dead 2*, *Red Dog*, *Sonic Adventure*, *Snow Surfer* (aka *Cool Boarders: Dreamcast Version*), *Sega Bass Fishing* (aka *Get Bass*), and *Soul Calibur*).

Sega is clearly not about to shoot its bolt upon launch, electing instead to supply its hungry audience in dripped fashion. But support remains unprecedented, with at least 30 titles available by Christmas. **Edge** will be rounding up all of them next month.

Lifestyle choice

Meanwhile, with a matter of weeks until the machine's launch in the west, the Dreamcast marketing campaigns are starting to gain momentum.

In Europe, the first two ads were shown at the UK premiere of 'Star Wars Episode I: The Phantom Menace'. They will stay in cinemas for eight weeks before switching to terrestrial TV and premium satellite channels,



Clockwise from top left: *Sega Rally 2*, *Toy Commander* and *Virtua Fighter 3tb* are guaranteed to appear with the Dreamcast when it hits game stores on September 23, although it's believed that Sega is proposing to stagger the releases of *Sonic Adventure*, *Sega Bass Fishing*, *The House of the Dead 2*, *Snow Surfer*, *Red Dog* and *Soul Calibur*



The two Dreamcast ads running with 'The Phantom Menace', entitled 'Shave' and 'Buoy', concentrate on drawing parallels between everyday activities and the social nature of playing games on Sega's console. The two ads will hit television screens during September and continue running up until Christmas

running until Christmas. The two advertisements, entitled Shave and Buoy, are backed respectively by Robbie Williams tracks, and focus on the social aspects of Dreamcast.

By contrast, the American marketing is more aggressive. Three generic adverts have already been rolled out on American television, starting with MTV. Entitled 'Anxiety', 'REM' and 'Claustrophobia', they feature typically cyberpunk themes, all ending with the phrase, "It's Thinking". Sega of America has started buying advertising space in cinemas as well but this will be for specific games. *NFL 2000*, *Sonic Adventure* and *Trick Style* will be among the first titles to receive such exposure.

Teaser campaign

Sega's decision to rent out Dreamcast units and games prior to its launch through 600 branches of Hollywood Video stores has also raised the console's profile in the US media, creating new demand. This offer started in July and was kickstarted by five celebrity parties across the country.

Gamers desperate for an early taste of the console, complete with the US version of *Sonic*, had to shell out \$20 for two days rental, as well as a hefty \$350 deposit to ensure the console's return. And, despite Dreamcast costing only \$200, some gamers felt it was well worth losing their deposits in order to own a pre-launch model.

On the other hand, import specialist National Console Support had more nefarious reasons for blowing \$700 on two units: it is attempting to unravel the localisation codes. Although Sega will be pleased to hear that the company promptly fried the motherboard of one of its 'test' consoles...

Generally, however, the American prelaunch period appears to have proved a success. "We expect to have well over 250,000 preorders by launch," Sega's head of marketing **Charles Bellfield** told **Edge**. By comparison, only 100,000 preorders were registered in the run up to the 1995 launch of the PlayStation in the west.

Preorders in the UK are also looking strong. Although no figures are officially available, retailers are bullish about the console's sales potential. HMV has been preselling Dreamcast at £30 since July, and Virgin recently started its own £25 campaign.

"It's going extremely well," an HMV spokesman told **Edge**. "Early demand appears to be greater than our initial expectations, and they were very high."

Sega predicts sales of 250,000 UK Dreamcasts by Christmas.



Robbie Williams' 'Let Me Entertain You' and 'She's The One' provide the tunes for Sega's first stab at selling Dreamcast in Europe

Sega's American marketing for its Website, www.sega.com, focuses on the spiral Dreamcast logo, while its tv ads end with the phrase, "It's Thinking"



HOT IN THE CITY

PC conference proves popular showcase for new products

CUTTINGS

Ultimate cheat

The current obsession for selling *Ultima Online* characters and buildings on internet auction service eBay has claimed its first victim. A member of the *Ultima* support department, known in game as GM Darwin, was found to have been using his GameMaster powers to create an enormous stash of online riches, which he then sold for good green cash.

A search of his eBay account revealed the sale of more than 19 million gold pieces, in addition to three houses, a tower and a pair of castles. These were exchanged for almost \$8,000. After being tracked down by a suspicious *Ultima* fan, Darwin (real name Kevin Roseler) was immediately sacked by developer Origin.

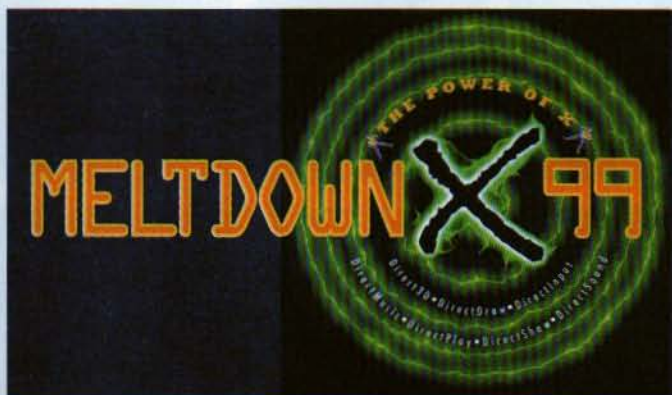
Good news for Stroud

Despite all being made redundant following Psygnosis' massive reorganisation, the team at its ex-Stroud office has good reason to feel satisfied. Having completed *G-Police 2* (see p78), Acclaim has announced it will take over the studio, adding it to the existing teams based in Teesside and London. Work at Stroud will concentrate on games for Sony consoles.

London's Stakis Metropole Hotel recently played host to Microsoft's annual European Meltdown Conference, a business-like event for PC developers and hardware manufacturers where they can test their wares on each others' products.

Equally, Microsoft uses the event to promote its *DirectX* technology. And with *DirectX* now established as the common development platform for PC games, Meltdown's function is an educational one. Its three days of sessions get developers up to speed on everything from the role of *Windows CE* in programming for Sega's Dreamcast, to implementing hardware bump-mapping.

And PC developers certainly seem to like the event, with attendance up a fifth to around 250 this year. Representatives from Electronic Arts, Codemasters, Bullfrog, Infogrames and Eidos, among others, joined hardware manufacturers ranging from Intel and AMD to Creative Labs. "This was Creative Labs' second European Meltdown, and we have been very impressed with the level of attendance," comments **Andrea D'Orta**, European developer relations manager for the company. "It's been good to see that developers are realising that making a great game is not just a matter of throwing thousands of polygons at the screen, but that there's a working synergy between sound and graphics, and that 3D



Attendance at this year's Meltdown '99 conference was high. Microsoft's *Windows Game Manager* was shown to expectant crowds for the first time

audio is a must-have feature in the next generation of games."

Whereas the Develop! Conference (see p60) attracts a large number of attendees from the console community, Meltdown caters for the PC arena, and as such provides an important forum for developers and manufacturers to exchange ideas. **Dara Gray**, thirdparty marketing manager for 3Dfx adds, "It's really valuable for us to have this kind of interaction with studio chiefs and creative directors. European development is critical to 3D game development, so it's important that we meet and discuss any relevant issues. The social side is also really good fun."



THE LOW-DOWN

The average gamer wouldn't survive long in a session entitled 'Tools and Utilities for Maximising Performance'. Still, a couple of Meltdown seminars would whet most PC-heads' appetites. *DirectMusic* is impressive, while *Simis'* first European demonstration of hardware geometry processing (using technology from 3D Labs) would have excited anyone wondering where 3D acceleration is headed. Perhaps of greatest appeal, though, is *Windows Game Manager*, which received its first public showing at Meltdown. This initiative promises to make playing a game on a PC as easy as popping a disc in a PlayStation. **Edge** awaits more details with interest.

GAMES OSCARS A HIT

UK developers queue up to enter the annual BAFTA Interactive Awards

Proving they like to win gold trophies and party as much as any other entertainment industry, game developers have been feverishly preparing their entries for the second BAFTA Interactive awards. "Interest has been much higher after the success of last year's event," BAFTA coordinator **Helen Young** told **Edge**. The deadline for entries closed on August 6, with *Zelda* being the obvious frontrunner for glory. Rare's *GoldenEye* gained Best Game Award in 1998.

"These awards will quickly become as much part of the landscape as the TV awards," commented BAFTA vice president **Lord Puttnam**. The nominations for the 16 awards will be announced on September 20 with the actual ceremony taking place a month later. Further details can be found at www.bafta.org.



Last year saw the successful inauguration of the BAFTA Interactive awards, attended by celebs like Lord Puttnam, Stephen Fry and SCEE's Chris Deering

PRESCREEN

EDGE PREMIERES INTERACTIVE ENTERTAINMENT'S FRESHEST FACES

Beautiful gaming?

Exploring exploitative manoeuvres on the digital football field

With shop shelves groaning under the weight of footy sims, what chance has a publisher of grabbing Mr Casual Gamer's attention with its latest soccer extravaganza? Every title promises the same old suite of features, offering every team under the sun, realistic ball and net physics, advanced motion capture, accurate stadium recreation, dynamic environmental effects, sampled crowd noise, realtime shadowing during night matches, state-of-the-art AI – everything but the kitchen sink. Once you have a game that convincingly offers all of this, why would you want to spend more money on purchasing updates that are effectively the same product?

Inevitably, as with all consumer items that reach such a great level of market saturation, it's become a licensing match. And EA is comfortably in the lead, with minutes to go. Its massive publishing power is only equalled by an immense internal marketing machine, ensuring that when a 'new' EA football game is out, even a hermit in the deepest of Andalucia's caves gets to hear about it. Certainly, flexing the FIFA licence to the boundaries of its resistance has provided the US company with numerous European number one hits for the last seven years. But the final whistle

hasn't blown yet and with licences of their own, Eidos and Infogrames are intent on making a comeback – though realistically speaking, they have only injury time left in which to repair the scoreline. EA will continue to release three near-identical footy titles every 12 months (five during World Cup years, if rumours are correct), and credulous game shop frequenters will happily hand over their Switch cards at the counter.

What is astounding is the absurd short-termist attitude displayed by the majority of the game publishers at work here. By inundating the market you may get healthy sales at the outset (at least if you're armed with the right review scores and ad budgets), but eventually the bubble should burst. Even Average Joe Punter has his limits, and yet publishers are about to target him with more football titles than ever.

Increasing the interval between footballing releases not only cuts down on development costs (obviously, as less versions are produced), but by the time the new sequel is ready, the target audience will be genuinely eager for a follow-up. The result? Massive sales in one outing rather than running the risk of exhausting the audience with too frequent updates. Hey, it's an idea.



Is there really room for relentless release schedules in an already saturated genre? New footy titles include (from left to right) *Premier League Stars* (EA), *Striker 2* (Infogrames) and *This is Football* (Sony)

Edge's most wanted

Summer lovin', happy at last



Strider Hiryu 2

Colin McRae Rally 2

Quake III: Arena

Trick Style

(Coin-op) Capcom

(PS/PC) Codemasters

(PC) id software

(DC) Acclaim

Capcom wasn't shouting this title from the rooftops at E3, instead leaving it sitting in a quiet corner. It won't be 3D enough for many, but it's still a hoot.

Codemasters plans to improve every aspect of the sublime original. While perhaps not the most realistic, this could easily prove the most playable.

Its release may be slipping backwards, but the drip of new levels and weapons convinces **Edge** that its position as the instant multiplayer rush is safe.

Floating over a racetrack is never quite as satisfying as roaring across one on four wheels, but Criterion's hoverboard sim could prove the exception.

Index

Prescreen Alphas

page 14



Jet Force Gemini

page 22

Vagrant Story

page 24



Chrono Cross

page 25

Prince Naseem Boxing

page 26

Urban Chaos

page 27

Dew Prism

page 28

Speed Devils

page 29



Virtua Striker 2 v2000

page 31

Rogue Spear

page 34

Creatures titles

page 40

Colin McRae Rally 2

page 44

PRESCREEN ALPHAS

PSYGNOSIS' BRAND LEADER FLIES IN THE FACE OF PREVIOUS INSTALMENTS, WHILE NINTENDO BITES BACK

WIPEOUT 3

FORMAT: PLAYSTATION DEVELOPER: PSYGNOSIS



All of the major elements from Psygnosis' third instalment in the massively popular *Wipeout* series have improved since *Edge* first showcased the title in E72. The handling has been tightened, the graphics tweaked, all of the modes implemented, and the menu screens have now been completed and look wonderfully minimalist - very Designers Republic. The resulting package is a stark contrast to its predecessor's cartoon-like appearance. It's also a rather appropriate swansong for the series before the inevitable next-generation PlayStation interpretation emerges. Expect a review next issue.

DONKEY KONG 64

FORMAT: NINTENDO 64 DEVELOPER: RARE



Six new shots of Rare's forthcoming 64bit realisation of Nintendo's popular *Donkey Kong* franchise. Unlike *Jet Force Gemini*, though, this RAM Pak-only 32Mb cart offering continues on schedule to hit its November 22 US release date (expect a UK release around the same time) and at present there are no signs of possible delays. If Ken Lobb's exclusive closed-doors presentation at E3 is anything to go by, expect to be playing this through into the new year.

RESIDENT EVIL: NEMESIS

FORMAT: PLAYSTATION DEVELOPER: CAPCOM



The release of *Dino Crisis* seems sure to heighten expectations for the next episode of the real thing. And thanks to its reliance on prerendered backgrounds instead of the 3D locations inhabited by the dinos, *Nemesis* is looking more gorgeous than ever. Limited to a single disc, the gameplay promises to be more immersive, too, with puzzles proving less contrived, and the Nemesis boss more terrifying than anything previously seen.

MUSIC 2000

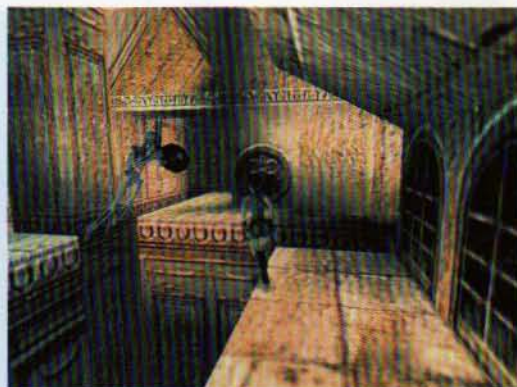
The follow-up to Codemasters' successful PlayStation music maker, *Music 2000* now features a friendlier and more intuitive control interface. The number of samples has been doubled while the musical categories have also been extended. A particularly interesting feature is the music-jam option. Here, up to four players can assign different audio samples to their joypad's buttons and then join in a group jamming session. You will find it hard to believe how addictive it can prove. Hours simply fly by. (Honest.)



TOMB RAIDER: THE LAST REVELATION

FORMAT: PS/PC DEVELOPER: CORE

November hosts the arrival of the now yearly Lara Croft update. If you're still reading, this fourth instalment is entirely Egypt-based and new programming tricks ensure seamless transition between game and cut-scenes, so no more loading screens. New moves, new puzzles, new inventory system, better fighting, yadda, yadda (main three shots are PC).



SHAO LIN

FORMAT: PLAYSTATION DEVELOPER: POLYGON MAGIC

The most immediate aspect of this November release likely to attract gamers is the frantic simultaneous eightplayer option (the PlayStation doesn't manage eight high-poly-count models on screen at once, opting for angular wooden training dummies instead - see bottom right). In addition to the two- and fourplayer alternatives ('real' characters this time), the RPG-inspired quest mode has you fighting enemies for experience points in one of six martial art styles.



DEATH CRIMSON 2

FORMAT: DREAMCAST DEVELOPER: ECOLE



With *House of the Dead 2* currently the only game carrying the flag for Sega's Dreamcast lightgun peripheral, the appearance of *Death Crimson* will surely be good news for shooter fans. The original Saturn title has a science-fiction theme, but developer Ecole has opted for horror imagery this time around. Surprisingly, a fourplayer mode is planned for the title.

GRAND THEFT AUTO 2

FORMAT: PC DEVELOPER: DMA DESIGN



Development of arguably DMA's strongest brand continues apace, these new shots revealing more of the dark, sinister locales that will play host to destruction aplenty. Weapons new to this sequel include the molotov cocktail (relatively wide area of damage but weak range), the silenced pistol (for those quieter moments), and the police's favourite, the tazer.

KIRBY 64

Kirby's Air Ride was supposed to be one of the launch titles for the N64, but like other games such as *Buggy Boogie*, it disappeared into the development ether, never to see the light of day. HAL Laboratories, the codeshop responsible, has now opted to lash together a 64bit update of its 8- and 16bit *Kirby* platformers. The result, inevitably, will be a title high on cuteness but low on challenge. Is this really what N64 owners bought their machines for?



BANGAIO

FORMAT: NINTENDO 64 DEVELOPER: TREASURE

Offbeat concepts are most definitely Japanese softco Treasure's bag, and its latest project, a shoot 'em up for the N64, is an action game with a twist: it features super-twee graphics. The size of the sprites being thrown around the screen simply means that there can be more of them, resulting in scene after scene of pyrotechnical extravagance.



SOUL FIGHTER

FORMAT: DREAMCAST/PC DEVELOPER: TOKA



French codeshop Toka has shown a predilection for scrolling beat 'em ups ever since it unleashed titles such as *Iron Commando* and *Legend* on to the SNES, and its full-blown 3D extrapolation of those themes is being swiftly realised in *Soul Fighter*. It's a necessarily straightforward game, but its firstperson mode, used for ranged weapons, is a neat twist.

ROADSTERS

FORMAT: NINTENDO 64/PLAYSTATION/DC DEVELOPER: TITUS

Shown on the N64 at E3 (the main three shots here are PS; the DC version is not shown), *Roadsters* stood out as a promising racing game despite some steering sensitivity problems. The finished version will have 30 real convertible sports models (including the Lotus Elise and Ferrari F50), ten tracks, and four modes of play. A winter release is expected.



HYPERBIKE

Developed by the same team behind *Top Gear Rally 2*, Kemco's entry into the rapidly expanding world of N64 motorbiking focuses on realistic physics and extensive motion capture for the riders. Dirt bikes, street bikes and secret bikes are available to race over six tracks, and a reasonable sense of speed is maintained throughout. Things look a little bland graphically, although a visual boost is promised via RAM Pak compatibility, giving more detail.



THE NOMAD SOUL

FORMAT: PC DEVELOPER: QUANTIC DREAM

So, you probably already know it was David Bowie, then – the artist contracted to contribute to *The Nomad Soul* (formerly known as *Omikron: The Nomad Soul*) soundtrack that **EDGE** wasn't allowed to reveal in E71. It doesn't alter the game in any way (although Bowie does play two characters in Quantic Dream's ambitious adventure, one of them alongside real-life wife Iman), but you can tell by these latest screenshots how much the project has developed since.



F1 '99

FORMAT: PLAYSTATION DEVELOPER: STUDIO 33



F1 games may be imitating football titles (see Prescreen Intro, p13), but at least a lot more room for improvement remains within the digital Formula One season. Enter *F1 '99*. Developed by the Newman Haas Racing boys, this is looking promising, having already surpassed the dreadful *F1 '98* from Visual Sciences' (now working on EA's F1 games). Draw distance is impressive and the comprehensive package includes, for the first time, the presence of a safety car.



SUZUKI ALSTARE RACING

FORMAT: DREAMCAST DEVELOPER: CRITERION STUDIOS

These are the first shots of the DC version of Ubisoft's former PC motorbike fest, *Redline Racer*. The deal with the Suzuki Alstare team (Superbike and Supersport contenders) results in a new name, new track design, an extra urban environment, new samples, plus enhanced visuals and lighting effects.



JET FORCE GEMINI

After a final, but not unexpected, development delay to alter main character design, **Edge** spends a few precious hours playing Rare's next N64 title



The realtime lighting and dynamic reflection routines in *JFG* translate poorly in screenshot form, but it's certainly one of the best-looking N64 games yet



You're really supposed to rescue the Tribes from their enslaved existence. But blasting them is so much fun...

In typical Rare 'it'll be ready when it's ready' fashion, when you get a call inviting you to the Nintendo-biased developer's new headquarters to have a look at one of its products for preview, you know the development stage is nearing its end. Having been privy to such a summons, **Edge** is more than happy to hot-foot it to sleepy Twycross, through Rare's inconspicuous entrance gate and past several manually controlled camera stations along the lengthy driveway, before arriving at an expanse of Tarmac populated by Ferraris, Porsches, Lotus and other generally swift vehicles, where **Edge** counts at least a further eight cameras on constant alert. It's good to see some things remain reassuringly constant at Rareware.

Resisting the reaction to wait until all security optical devices face outwards so as not to step into their field of detection (an unfortunate side effect from replaying *Metal Gear Solid* this month), **Edge** walks purposefully through the main entrance and asks to see *Jet Force Gemini*. While the sense of urgency impresses no one, politely signing in and waiting to be escorted to the demo room seems a reasonable alternative.



A deathmatch mode for those with enough friends proves surprisingly intuitive given the thirdperson view (note the new character design)

Had you believed the release date put forward at the E3 convention back in May, you would most likely be playing this by now. But not wanting to shock the gameplaying public by hitting its proposed commercial outing, *JFG* has slipped. Only by a month, though – just enough time to rework the main characters, as those with the more acute visual memory among you have probably already noticed.

Alien bug-slaying duo Juno and Vela (the changes to Lupus the dog are not as immediately apparent) have gone through an elongating

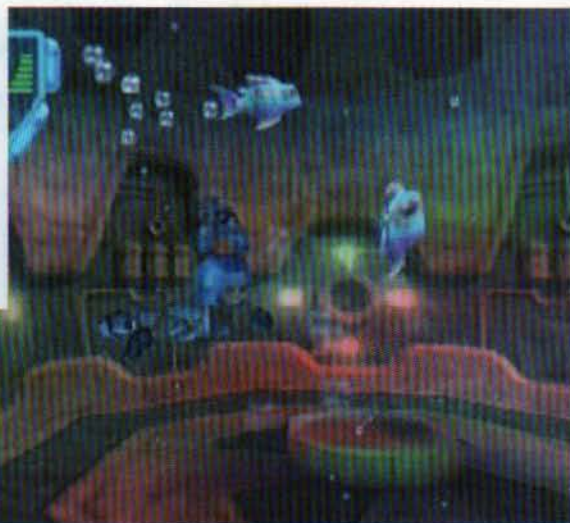
Format: **Nintendo 64**

Publisher: **Nintendo**

Developer: **Rare**

Release: **September**

Origin: **UK**



Despite its cuteness, expect insectoid intestines to decorate the levels' walls with alarming frequency. Pro-Logic sonics enhance the effect

No game these days is complete without an underwater section for main characters to swim in, something that hasn't been left out of JFG's design

exterminator hats and stop him in his tracks. Naturally, each of the three characters are controllable, and while their individual skills take them on different routes, their inevitable rendezvous with Mizar sees them reunite.

Before then, approximately 420 locations must be cleared of any alien scum, countless puzzles solved and perilous routes negotiated.

Alien bug-slaying duo Juno and Vela have gone through an elongating process, resulting in a more adolescent look


process, resulting in a more adolescent look which contrasts heavily with the 'super deformed', manga-esque influence previously evident. It's a wise move, but while Rare may tell you that it was an internal decision, **Edge** wouldn't be surprised if, after seeing the game at E3, Nintendo felt a certain anxiety at seeing childlike characters blasting insectoid parts all over the scenery (particularly in lieu of the 'videogames killed my son' tabloid hysteria).

The story remains the same, however. Evil space bug tyrant Mizar passes the time by invading alien worlds. When his insectoid minions reach the Tribal planet, it's up to the residing crime-preventing JFG trio to don their galactic

As you progress, you encounter new weapons until your chosen character disposes of an impressive arsenal: mini-guns, flame throwers, plasma shotguns, cluster bombs, sniper rifles, grenades and shuriken are but a few.

Another aspect to be completed are the many cut-scenes Rare has implemented to carry the story along. Something of a trend since *Zelda (Perfect Dark* also has its fair share of cinematics using the ingame engine), the stylish camera work highlights key plot moments with aplomb.

More importantly, Rare's trademark multiplayer options are particularly evident here. One to four friends can engage in 3D hover racing as well as *Super Sprint*-type antics, deathmatching, and *Lethal Enforcers*-like target practice, for example. The first two are also available in the oneplayer game, forming part of *Jet Force*'s many references to past videogames - **Edge** won't spoil the surprise by revealing them all.

It's easy to categorise *JFG* as an old-school shooter, but there are plenty of novel touches and some intriguing approaches to familiar situations that make it worthy of attention. **Edge**, for one, is looking forward to reviewing the finished product in the very near future. 



(From top) Hover and Super Sprint-ish racing, and target shooting are some of the multiplayer games available to you



Nightclubs and chill-out rooms (right) are all part of the varied JFG package



VAGRANT STORY

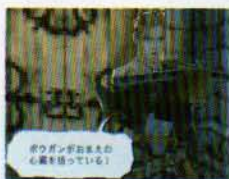
Mixing a familiar RPG setting with action-adventure gameplay, this murderous title represents an interesting new slant on familiar SquareSoft themes



Vagrant Story has a much darker and more mature look than SquareSoft's other current projects (see opposite). It's more *Castlevania* than *Chrono Cross*



Players can build their own weapons, opting for light arms or huge cutlasses



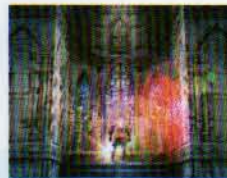
The character design is exquisite, combining well with the detailed, atmospheric backdrops and gothic locales

In the mythical kingdom of Valendia, a powerful Duke is murdered by the very knight assigned to protect him. And so begins *Vagrant Story*, a part RPG, part free-roaming thirdperson arcade adventure. Interestingly, the player takes on the role of the assassin – Ashley Riot – in what will no doubt become a quest to clear his name. Along the way he must do battle with a religious cult named Mullenkamp and its apocalypse-obsessed leader Sydney, whose malign influence threatens the stability of the realm.

Although the plot is hopelessly derivative, *Vagrant Story* is a mouth-watering proposition. The fully 3D scenery and characters are masterfully drawn, with texture detail surely pushing the PlayStation to its limits, and there are some interesting gameplay twists to boot. Most notable, is the 'weapon build' system: players can create custom swords, axes and maces by combining three weapon parts – a blade, grip and powerstone. These arms can also 'learn' from the creatures you slay, so that if you kill a fire monster the sword will, in future, cause greater damage to other fire monsters. It's also

possible to wound enemies, slowing them down with a leg shot, or reducing their sword skills with a slash to the arm – a touch of realism often missing from RPG-related games.

SquareSoft also promises an intuitive control system and smooth animation, as well as gothic backgrounds and cool characters. Plus, gameplay influences are coming in from everywhere: the monsters have fatal flaws which need to be discovered quickly – a throwback to the 2D shoot 'em up age – while the many traps and emphasis on stealth and strategy call to mind the more modern MGS. If these elements do come together, this could be a great title from a company currently in creative overdrive.



The scenery is stunning – which could explain rumours that the game can be completed in only eight to ten hours



The enemies all have key flaws which must be exploited carefully in battle

Format: PlayStation

Publisher: SquareSoft

Developer: In-house

Release: Autumn (Japan)

Origin: Japan

CHRONO CROSS

After *Final Fantasy VII* and *VIII*, and the announcement of *Legend of Mana*, SquareSoft continues its RPG exhumation with a sequel to time-travelling epic, *Chrono Trigger*



The incredibly rich colour palette used by the new *Chrono* team imbues each scene with fantastic depth and the vitality of an anime cartoon



The artists have made excellent use of light and shadow to create a variety of atmospheric settings. The inviting tavern (centre) is especially effective



As usual, the game presents a variety of interesting and diverse baddies including dinosaur beasts (top) and giant insects in the bath (above)

Although *Final Fantasy* tends to get all the press these days, 1995's *Chrono Trigger* probably did just as much to glamorise the RPG genre in the west as its illustrious stablemate. With a complex plot spanning thousands of years, excellent music and a cast of likeable characters, the game drew a huge audience, selling 2.5 million units on release in Japan.

Four years later, Square has revived the franchise with a new set of characters and a new development team. Although a few staff remain from the original line-up, legendary character and background designer Toriyama Akira has moved on to other projects, as has Sakaguchi Hironobu. The replacement team does have plenty of experience, however, coming in from games such as *Final Fantasy I, II* and *III*. *Chrono*, then, is still an A-list title as far as Square is concerned.

As for the in-game cast, even Chrono himself has departed, replaced by a cutesy youth named Serge and his female sidekick, Kid – a gutsy knife-wielding heroine. On the dark side is Yamaneko an evil cat/human hybrid whose underhand deeds and magical abilities make him a wylie foe for the two young protagonists. Although storyline details are few at present, the main thrust of the action takes place in Guardia – the Tolkien-esque empire featured in the original title. This time, though, instead of travelling backwards and forwards in time, the plot involves a parallel dimension into which Serge is unwittingly thrust. As in *Soul Reaver*, this other world mirrors the real Guardia, and anything that occurs in one dimension has direct consequences in the other.

For combat, Square has abandoned the old turn-based engine. Instead, a highly strategic setup allows players to give commands to their characters, and provides a thorough range of physical, as well as elemental (ie, magical), attacks.

What really marks the game out, though, is its beautifully atmospheric visuals. With a camera that gets much closer to the characters than most RPG fare, and some amazing light and shadow work, *Chrono Cross* fully captures the colourful vitality of an anime film. With CGI cut-scenes developed by the *FFVII* and *FFVIII* team, this could be a visual masterpiece as well as a welcome return to gaming pleasures of old.



The game uses a modified version of the original *Chrono Trigger* battle system, allowing precise realtime control over each playable character

Format: PlayStation

Publisher: SquareSoft

Developer: In-house

Release: Winter (Japan)

Origin: Japan

PRINCE NASEEM BOXING

In its quest for perfection, Codemasters put back the release date six months then embarked on a fundamental rebuild of what it hopes will be its prize fighter



The main reason for the development extension was the developer's wish to improve gameplay. Now the boxers can 'duck'n'dive' their way around the whole ring

As well as the oneplayer game (including the career mode), multiplayer fun is promised

If proof were needed of Richard Darling's comments regarding Codemasters' policy of not releasing games until it feels they are ready (see Audience With Richard Darling, p118), then *Prince Naseem Boxing* is certainly it. Initially scheduled for a spring release, the game is now not scheduled to appear until September. Not that **Edge** saw anything critically wrong with it when it got to try it out during May's E3 exhibition in LA. Quite the opposite in fact – things were looking promisingly playable.

But Codemasters thought different. So much so that the team behind it has gone back and reworked some fundamental areas. **Edge** had a chance to witness the latest transformation while on a recent visit to Codemasters' Warwickshire headquarters, and is more than happy to reveal the latest modifications. When the game last showed its face, the action had been entirely animation based. Not so now.



Expect the presentation throughout to reflect Codemasters' usual high standards



In order to enhance playability, many aspects of the game remain reassuringly arcade-like, although a certain authenticity is included

Opting instead for a physics-influenced environ, everything has a force value assigned to it. The change is immediately noticeable. Any tweaking of variables, such as weight or power, will have a knock-on effect on the gameplay.

The default camera now displays the fighting from a more playable vertical perspective. More importantly, the development team was unhappy with the lack of 'ducking and diving' around the ring in the previous versions, admitting that there was a tendency for the fighting duo to stand firmly rooted to a spot, punching the polygonal excrement out of each other. Again, this has been altered so that now the whole of the canvas-lined area is used as two players attempt to land a well-timed digital punch.

The game's original modes of play (tournament for up to eight players, versus, and oneplayer career options) have so far survived, and a total of 90 fighters with an impressive moves repertoire still looks set to make the final version, which **Edge** is certainly looking forward to getting its hands on.



The game used to be centred around an elaborate animation system for its play mechanics, but a complete rework sees a physics-based engine take centre stage

Format: PlayStation/PC

Publisher: Codemasters

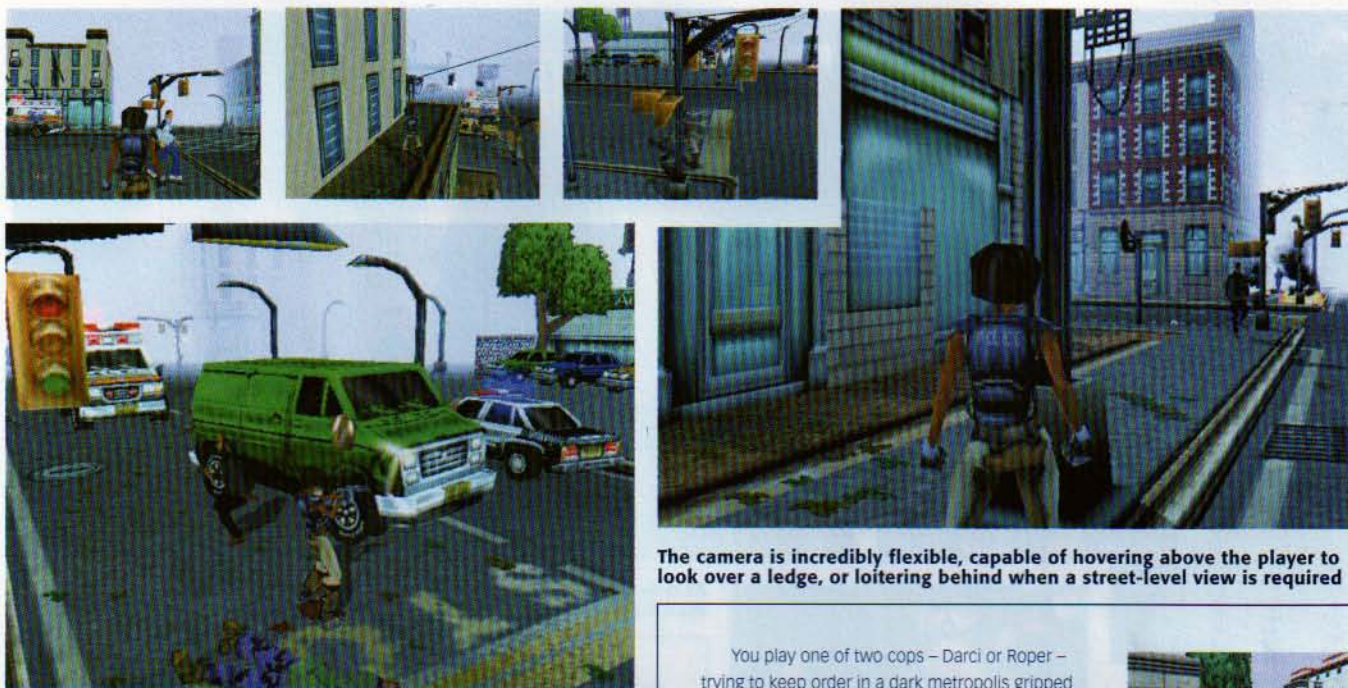
Developer: In-house

Release: September

Origin: UK

URBAN CHAOS

The opening game from ex-Bullfrog outfit Mucky Foot combines a liberal splattering of genres in one futuristic, apocalyptic adventure



The camera is incredibly flexible, capable of hovering above the player to look over a ledge, or loitering behind when a street-level view is required

The streets of *Urban Chaos* are busy with pedestrians and city traffic – where you will, of course, be penalised for beating innocent people up

Nostradamus has been getting a lot of publicity lately. A few weeks ago, flocks of his most ardent believers were preparing for the end of the world – an event he had reportedly scheduled for sometime in July. They must have been so disappointed when the four horsemen failed to show – or will the August eclipse spell disaster? Either way, Mucky Foot has released an early demo of its forthcoming arcade adventure set at the turn of the century, and based around the old trickster's prophecies of Armageddon.



The twoplayer cooperative mode could prove an interesting option, as it makes use of both of the game's lead characters

You play one of two cops – Darci or Roper – trying to keep order in a dark metropolis gripped by pre-millennial tension. It's a thirdperson affair, combining the eclectic character abilities of *Ms Croft* (jumping, climbing, etc), with the fisticuffs of *Fighting Force* and the weaponry arsenal of a good firstperson shooter. The player has free run of the city, which is filled with vehicles and pedestrians, all going about their own business as police helicopters swoop above and rubbish blows about the dirty streets. It's a very atmospheric, well realised environment that should serve the shadowy storyline well.

As for gameplay, the action is mission-based. One minute you'll be storming a crackhouse near the beach, the next you'll be breaking up a gangland meeting in a baseball arena or trying to talk a suicidal man down from the roof of a skyscraper. There are various NPCs to interact with along the way, and you can get into different vehicles, which accentuates the feeling of being immersed in the life of a 'real' city.

At the moment the controls seem a little fiddly (left and right keys rotate the onscreen character, a familiar tactic that can make intricate movements difficult), and the fighting is a little basic. However, with a good range of missions, decent weapons, and a variety of city areas created with the attention to detail that **Edge** has witnessed so far, *Urban Chaos* could prove to be an atmospheric and eminently playable game, if not entirely original.



Nearly all of the many objects in *Urban Chaos* offer some form of interactivity. NPCs are no different, of course

Format: PC

Publisher: Eidos

Developer: Mucky Foot

Release: September

Origin: UK



DEW PRISM

Action RPG or women's body fragrance? This delicately titled game could be either. Predictably, Square has decided to develop it as the former



Dew Prism boasts a large cast of NPCs, who will interact differently depending on which of the two characters you've chosen to play as



Mint and Lou are both searching for the Dew Prism. Lou wants it to bring back his dead sister, while the princess wants it for more dastardly ends...

The market will be awash with new RPGs by the end of the year – largely thanks to the recent efforts of Square. While *Vagrant Story* (see p24), *Chrono Cross* (see p25) and now *Dew Prism* are all in development, two of them – *Dew Prism* and *Chrono Cross* – even share the same producer, the possibly over-worked Tanaka Hiroshi of *Final Fantasy* fame.

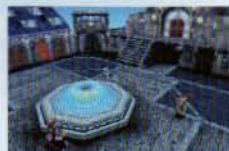
Dew Prism is a different kettle of goblins altogether, though. Where *Chrono Cross* has an almost naturalistic look, *Dew Prism* is pure super-deformed cuteness – aping both the mini-characters and the simple, realtime 3D platformer controls of *Zelda*. Comparisons have also been made with Square's earlier action RPG, *Brave Fencer Musashiden* (8/10, see E63), mostly due to the similar character design and the game style. Whatever the case, *Dew Prism* gives you a choice of two characters, both searching for the eponymous magical artefact.

As in *Zelda*, the super-deformed look makes all the characters resemble wide-eyed children. The game's so cutesy, even the sabretooth tigers look huggable

Lou is a young orphan who needs it to reanimate his dead sister brutally murdered three years before, while Mint is a spoiled princess who wants to use the Prism's magical properties to defeat her sister and take her place on the throne. The setting, of course, is a standard RPG realm of sword and sorcery, where monsters run free and the local inhabitants are generally lifeless until you go up and talk to them.

Naturally, the game differs depending on which character you choose. Lou's quest is a bit of a tear-jerker, while Mint's is more comic – plus, although they meet the same characters during the course of their adventures, they will act differently depending on which protagonist you've chosen to play as. And if you choose to play Mint, you'll bump into Lou along the way – and vice versa – giving the *Dew Prism* universe a neat uniformity.

While perhaps not quite as visually arresting as *Chrono Cross*, *Dew Prism* does have a charming style, and the contrasting experiences and abilities of the characters (Lou can turn himself into different monsters, while Mint can use spells, for example) should give the game considerable replay potential. Also, the simple interface, which doesn't even appear to change during fights (there are no special battle screens or modes) should ensure the game's appeal extends beyond the usual circle of RPG obsessives.



The game's plot differs depending on which of the two characters has been selected. Expect to run into the other at certain points, though

Format: PS/DC

Publisher: SquareSoft

Developer: In-house

Release: October (Japan)

Origin: Japan

SPEED DEVILS

UbiSoft's well timed and thoughtfully tweaked pseudo-sequel to *Speed Busters* is perfectly positioned to catch the Dreamcast wave when it begins to roll



New features include some additional track elements such as this striking twister-infested Louisiana circuit, which has you battling to stay ahead of the pack while avoiding the perilous phenomena nature throws your way



Some of you may remember UbiSoft's PC racing specimen *Speed Busters*. Released last November, the game proved an enjoyable venture into the realm of the fantastical – its tracks, though inspired by real locations, contained many arcade elements. For example, you'd negotiate a corner only to face falling rocks, or you'd have to outrun a mechanical T-Rex – a risk you take when racing around a Hollywood film studio lot. Yet, while *Speed Busters'* approach to a genre increasingly preoccupied with realism proved refreshing, it suffered from several limitations.

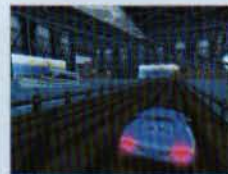
Enter *Speed Devils*. While a relatively simple Dreamcast port could have been an option, and one immediately attractive to a less scrupulous developer, to its credit UbiSoft opted to polish the jewels and correct the faults of the *Busters* original. The result, as the slight name alteration suggests, is a tweaked pseudo-sequel.

Other than the ten varied (and fully damageable) vehicles, the 13 tracks – inspired by seven different environments – improved visuals and other similar revisions, two major alterations are immediately noticeable. The first, is the introduction of finance into the equation. In championship mode, several income-generating opportunities exist (which in turn allow you to

purchase better cars or upgrade current models). You can also place bets before the actual race, and, while you're driving, factors such as top speed, fastest lap, and the finishing position also carry financial rewards and incentives.

The second Dreamcast-only addition is the multiplayer option. Not, as its title may suggest, a 16-player online option (sadly, *Speed Devils* doesn't exploit the machine's modem capability), but rather a series of twoplayer games. The traditional head-to-head game is there, but with it are four other modes. In a move partially inspired by *Micro Machines*, several battle-type racing games exist. One requires a player to defend his lead while the second-placed racer frantically attempts to steal it. Another has you attempting to secure all of the money-making factors (fastest speed, lap, position, etc) present in the oneplayer championship before your adversary manages the same feat. Long after the main game has been vanquished, the multiplayer options promise more play value.

In its current form, *Speed Devils* could emerge as an intriguing and playable proposition come Dreamcast's launch. It's all set to find itself in the enviable position of being the first of its kind on Sega's 128bit machine, which should further its potential.



There is a pleasingly solid feel to the game. It's a good start for UbiSoft's European Dreamcast attack

Format: **Dreamcast**

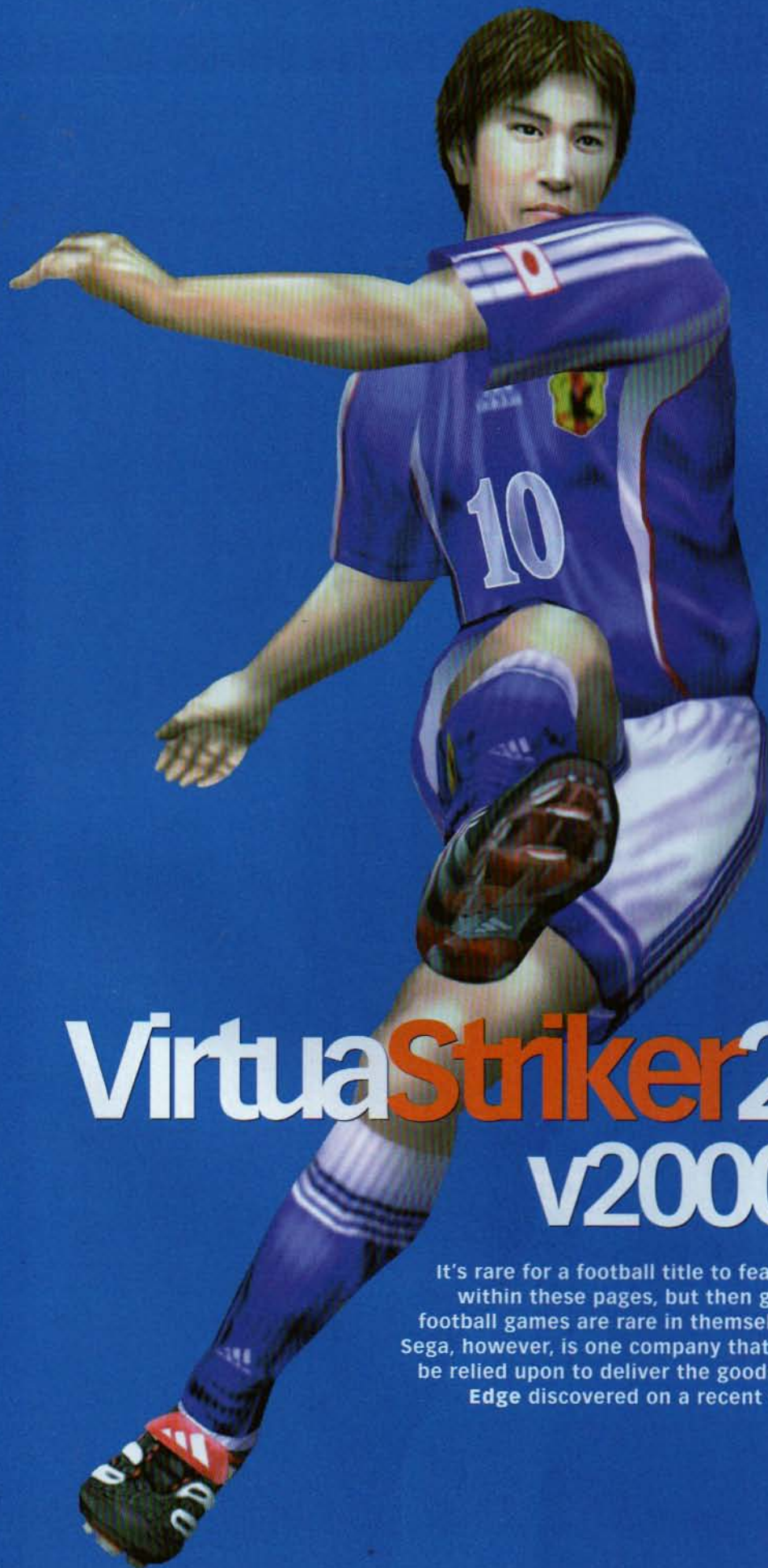
Publisher: **UbiSoft**

Developer: **In-house**

Release: **September (US/UK)**

Origin: **Canada**





VirtuaStriker2 v2000

It's rare for a football title to feature within these pages, but then great football games are rare in themselves. Sega, however, is one company that can be relied upon to deliver the goods, as Edge discovered on a recent visit

In the field of football coin-ops, nothing comes near Sega's *Virtua Striker* series. Now entering its fifth incarnation – following the Model 2-powered original and the Model 3-driven *Virtua Striker 2* and v'98/v'99 updates – its silky gameplay has shrugged off so many challenges from competitors that they no longer bother to release new football games of their own to compete with it.

Sega's **Satoshi Mifune** has been working on the series as programmer/director since its inception in 1995. With just over a dozen staff, he is taking a backwards step in technological terms by producing *v2000* as a Naomi title. Edge met with him at the headquarters of Sega's AM R&D#11 to talk tactics.

Edge: When did you first start work on the game?

Satoshi Mifune: We only started to develop it on Naomi this year, but we undertook a large part of the preliminary work on Model 3 from autumn of last year. At that point we started to work on the conversion tools for Naomi, and reviewed different features of the game. The result of that was making another Model 3 game [*Virtua Striker 2 v'99*], although that wasn't the intention at the beginning – it was supposed to be



VS2 v2000 looks strong as a Naomi title. A DC port should follow soon



Players now have more freedom to break from their formations, of which there are a number of new types, including 3-4-3 and 4-5-1



Project director Satoshi Mifune worked on several driving games with Yu Suzuki within Sega's AM R&D#2 before joining Software R&D#4 (previously known as AM R&D#11)

Naomi. But we decided to finish the Model 3 version and release a Naomi version later.

Edge: Why did you decide to produce an update of *Virtua Striker 2* instead of developing *Virtua Striker 3*?

SM: First, there was a graphical problem. We needed to provide radically different visuals to players, and we didn't feel we could do it. In gameplay terms, between *Virtua Striker 1* and *2* we made everything again, right down to the controls. Furthermore, while making *Virtua Striker 2* we didn't use all of the capacity of Model 3 - there were still lots of possibilities, so we made a '98 and a '99 version. By not reviewing the whole basic system, but changing only the game content and improving the controls, you still get the feeling that it is *Virtua Striker 2*. For a *Virtua Striker 3* we would need to review the fundamental parts of the game.

A big improvement that could be made would be to give more freedom to the players. If we can't do that then we cannot make a VS3. But updating both hardware and software is difficult - it's easy to put the number 3 at the end of a game's title, but it would not be honest.

Edge: Are you happy with what you've achieved with the series so far, or is there room for improvement?

SM: There are a lot of things I am not satisfied with. For example, depending

on the distance to the ball there are things you can do and cannot do, but on a real field you can adjust by extending your leg. There are many things that real players can do that are not implemented yet in a game. These parts can be improved, but not at the risk of harming the gameplay.

Edge: What specific improvements are there in *v2000*, the latest game?

SM: The core gameplay is essentially

the same as before, but we've added different features, such as the possibility to change tactics. We also have new formations, teams and stadiums, but we found it very difficult to touch the heart of the game. If we tamper with it, the game might become too complicated.

There are also numerous improvements we've made to the engine that cannot be seen in the game. When we want to modify a small part



Given the limitations of Naomi hardware, Sega's coders have performed some feat in making this in some respects better looking than its Model 3 precursor

Format: Coin-op/DC (TBC)

Manufacturer: Sega

Developer: Software R&D#4

Release: TBA

Origin: Japan



The game features five new teams – Tunisia, Morocco, Norway, Iran and Cameroon, although the difference in skill is not as big as might be expected

we sometimes have to go back very far in the program and modify a very basic part of it. We progressively improve the engine by modifying and adjusting small program parts. The quality raised progressively.

Edge: What was it like to convert from Model 3 to Naomi?

SM: It was very difficult [laughs]. It was not so difficult to convert the software – it was relatively easy, in fact – but the visuals were very difficult. After making the first ‘easy’ conversion we looked at the screen and we were very disappointed by the result. It was horrible. We first thought that nothing in the world could perform better than the Model 3. But we worked on the program and the way to display graphics and progressively the game became better.

Edge: The results look impressive.

SM: Comparing the versions precisely, the game is even better on Naomi than the Model 3. Resolution is very precise and the compression is also pretty good on Naomi. Images are actually sharper than Model 3 images.

Edge: What about frame rate?



The new graphics engine generates a selection of remodelled stadiums



In order to retain the fundamental appeal of the series, the control system has not been tampered with. The enhancements lie elsewhere



SM: In some respects it is lower, but we succeeded in pushing the game to a good level. In front of the goal, when there are lots of characters moving, the game is sometimes slowing down. But we are still working on it and we are confident we will make it disappear.

Edge: What has been the most difficult part of development?

SM: The graphics, surely. For Naomi to display graphics we directly access the CPU processing power. It is different for Model 3. The main program processing of *Virtua Striker* is very heavy. It was very important for us to release a game visually at the same level as Model 3. We needed to speed up the program and display nice graphics. That was the most difficult thing.

Edge: Have you started work on a Dreamcast version?

SM: Not yet. Well, we’ve started to make the preliminary work, but nothing has been decided yet. We don’t yet know how close the Dreamcast version will be to the Naomi version. It also depends on the time granted to us to make this [coin-op] version.

“When we made the first conversion we were very disappointed with the results. We first thought that nothing could outperform Model 3” Satoshi Mifune

Edge: The *Virtua Striker* series is one of Sega’s biggest, although it doesn’t get much praise in the press. Just how popular are the games?

SM: It is very difficult to say, but there have been some surprises, such as in Italy, where the game sold as much as it did in Japan. I was very surprised about that – because of the number of game centres in Japan, a big figure can be justified here, but the number in Italy are a mystery. Greece was also a very good market for us, for some reason.

Edge: Have you targeted v2000 at any particular market?

SM: I don’t believe we take into account any differences between Europe and Japan. Because it’s an arcade game, there are no big differences between the teams’ levels. However, without mentioning any names, some are better than others [smiles].

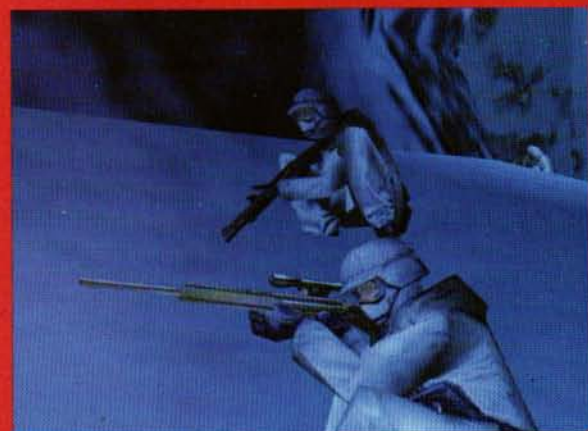


RogueSpear

Following *Rainbow 6*, the game that detonated the whole tactical combat explosion, Red Storm's latest special forces game takes the realism and adrenaline rush of hostage rescue to new levels



The first mission of *Rogue Spear* is to retake the Metropolitan Museum of Art which has been occupied by terrorists objecting to an exhibition of Egyptian antiques



Environmental effects such as snow and rain have been added. As in *MGS*, guards will be alerted if they see footprints in the snow

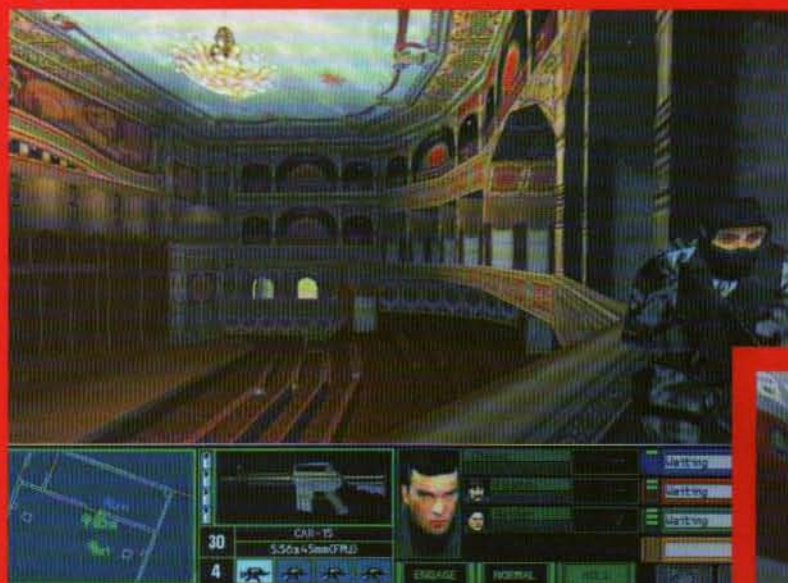
Two life-sized targets are pinned to the doors of the *Rogue Spear* office. Swarthy-looking terrorists clutching chunky assault rifles, they are souvenirs of the team's visit to an army weapons range.

One has been shot to pieces, with the bullet holes spread as much outside the target area as inside. The damage is so wayward you wouldn't be surprised to learn that it had been inflicted with a blunderbuss – inaccurate doesn't do it justice. The other target demonstrates

the neat patterns of a trained professional, however. Closely bunched clusters dot the target's vital areas.

Placed in a hostage situation, it's obvious which marksman you'd prefer to be rescued by. It's also a daily reminder of the *Rogue Spear* philosophy: modelling the accuracy, planning, and ice-cool thinking required in special force situations, and converting it into the form of a computer game.

Behind those targets, and surrounded by copies of 'Small Arms of



Even during an assault, the player can access information such as the location of squads or weapon load-out. The aircraft hijack (right) is sure to be a highlight



the World" and the occasional replica gun, programmers compile tables listing the rate of fire of the Steyr assault rifle and the 'run accuracy' of the '357 Desert Eagle pistol. Want to know the recoil effects of offloading all seven shells from the fully automatic SPAS 12 shotgun in just over a minute? It'll be in a database somewhere here. Because if there is one thing Red Storm is justly proud of, it's the realism that underpins the *Rainbow 6* experience.

So real it hurts

The game's legend, 'As Real As It Gets', isn't just marketing hype. Although they don't like to talk about it, it's clear the team have close ties with military agencies. This level of contact has almost been written into Red Storm's DNA thanks to founder Tom Clancy. His books display a startling level of veracity for someone who claims never to have actually read a classified document. But, in the case of *Rainbow 6*, the links go both ways. The special forces of more than one country have communicated that they use the game as a part of their training programmes.

But if the black ops were impressed by *Rainbow 6*, *Rogue Spear* takes the realism one step further. One of the key enhancements that producer **Carl Schnurr** is most excited about is the elaborate ballistics model that underpins the game's combat. This calculates each bullet's loss of kinetic energy as it exits

a gun barrel, subsequently working out what damage it can do when it hits a target. And, as the guns and ammunition have different mechanical properties, the combination of load-out kit brings a new level of tactical thinking to the fore.

For example, full metal jacket or jacketed hollow-point ammunition can be chosen. Combined with the right weapon, a full metal jacket round will penetrate body armour, whereas the hollow point won't. But, because of its softer composition, it has more stopping power against unarmoured targets. Schnurr explains the various tactical implications: "If you have a Colt AR 15 (an M16 clone) it may be armour penetrating at close range, but at long range it may not be. So now there's a reason to take a submarine gun instead of an assault rifle, because you have to be careful not to shoot through a terrorist and kill a team member or hostage."

Another repercussion of the over-penetration of rounds is that players will be able to shoot through doors, or snipe two terrorists with one bullet. In fact, the only physical effect the game doesn't model is the downward pull of gravity on bullets. According to Schnurr, a PhD in physics himself, with line-of-sight calculations needed for up to 38 characters on a level, all of which could potentially end up in the same room, there just isn't enough CPU memory available. And, as most of the fighting is



Carl Schnurr, producer, *Rogue Spear*

The only physical effect the game doesn't model is the pull of gravity on bullets. But as most of it is fought in close-combat, it doesn't matter much

close-combat, it doesn't make much difference anyway.

That stated, however, one of the most requested features for *Rogue Spear* was a defined sniper role. So two marksmen have been added to the Rainbow team, and the terrorists get their own dedicated snipers. The level designers have also created some

Format: PC

Publisher: Red Storm

Developer: In-house

Release: September

Origin: US



Although most of the fighting will be at close range, the introduction of the sniper skills means that teams will have to be very careful how they traverse large, open areas

spectacular spaces for long-range shooting: the Prague Opera House being one of the most striking. But, in keeping with their specialist status, snipers will need to be especially well protected. Once set in position (the 'sniper crouch' is one of the best of the new 400 motion capture animations to be added), they will be extremely vulnerable to terrorists attacking outside their narrow vision cone.

The other major request for the game was an aircraft hijack. Judging from the large-scale 747 plans that are pasted across the walls in the artists' office, particular care is being taken over this mission. And while it seemed strange that this classic hostage situation was not in *Rainbow 6*, there were some fundamental reasons for its exclusion.

"Our mission builders couldn't figure out how to do it without the framerate crawling to a stop," explains Schnurr, defensively. It's a timely reminder that despite the polished



Rainbow 6 is a byword for military realism, and *Rogue Spear* maintains its high standard. Not only are weapons accurately modelled, but so too is ammunition

nature of *Rainbow 6*, its developers were relatively inexperienced. It was the first game that many of the team had worked on.

Kicking up a storm

Red Storm itself had existed for less than two years and had only shipped a couple of games, but *Rainbow 6* has gone on to sell over 600,000 copies worldwide. It was also one of only three non-sequel PC games to make it big in the States last year.

But with the expertise gained in the intervening time, *Rogue Spear's* mission builders seem to have solved their technical problems. The 747 level looks amazing. It mixes the narrow aisles and the claustrophobic atmosphere of the

four-person team in there. Schnurr remarks: "There are limits to what our new AIs can do." This, of course, was the other major glitch in the team's inexperience with *Rainbow 6* – tales of gamers having to shoot their fellow team members in order to back out of a tight space have become mythic. Thankfully, all the AI has been rewritten for *Rogue Spear*, but while your team now gets out of the way when needed, the terrorists have become more testing opponents, too. Previously they were either totally unaware of you, or had heard or seen you. Now they can also be suspicious that someone is out there, and change their behaviour based on how immediate the threat is. "There are four states," explains Schnurr. "No

Pot of gold

Or: how a successful PC game property is having every drop of money-spinning potential wrung out of it

Considering the hit-driven nature of the games market, it's unsurprising that Red Storm is keen to aggressively reposition the *Rainbow 6* franchise. First of the console versions will be a Dreamcast port. Developed by Majesco, it is scheduled for the console's US launch.

Squeezing the game into Sony's 32bit machine is the job of Oxford-based Rebellion. However, because of obvious technical limitations, only three team members will be playable, and the game loses its strategic planning aspects.

The N64 and the Game Boy Color versions are more interesting, however, with both retaining the planning stage. The Macsoft team are currently working on a Mac version, too.

In the longer term, Red Storm is weighing up the tricky proposition of where to take the brand. Producer Carl Schnurr is interested in developing strong characters and storylines using *Rainbow* team leader John Clark.

Other options include creating a straight firstperson shooter or a realtime strategy version. And, of course, there are options for a movie.



Game Boy Color *Rainbow 6*



PlayStation *Rainbow 6*



Nintendo 64 *Rainbow 6*

The 747 level looks amazing. It mixes the narrow aisles and the claustrophobic atmosphere of the inside of an aircraft with the external lack of cover that airports offer

inside of a commercial aircraft with the external lack of cover that airports offer. It's a mission that will require players to judiciously place their snipers, while timing the assault team's attack to perfection.

Edge isn't looking forward to viewing the carnage after attempting it for the first time. The beta model of the plane even has toilets, although they may not feature in the finished version. People are bound to attempt to get a



Before planning a mission, the area can be seen as a 3D model



Once they manage to get inside the 747, rescue teams will find there is little room for manoeuvre. A successful mission will require split-second timing

After flashbanging the room in which the hostages were being held, he enters to find a terrorist with a handgun pointed straight at the head of a hostage

threat, distance threat, immediate threat and deadly threat." The terrorists' response to these states will depend upon their individual character attributes. Some will aggressively shoot at everything, even their own men, while others will panic and run for cover.

Watch your step

Another fine addition is radio check-in behaviour. On some levels, the terrorist leader will periodically check in with his men and ask if everything is okay. If someone misses three check-in calls, it alters the leader's state and he radios to all the other guards that something is wrong at a certain location. The mission scripter can then send in reinforcements.

Proof of the new capabilities of the enemy are unwittingly demonstrated



The planning phase features better graphics and clearer action icons

by Schnurr himself. Demonstrating one of the early missions, rescuing captured NATO commanders from a deserted Kosovan town, he is more than a little surprised to find himself being hunted down by a terrorist guard who had spotted his careful progress through the ruins. But the mission doesn't progress much further even when this lone wolf has been dealt with. After flashbanging the room in which the hostages were being held, he enters to find a terrorist with a handgun pointed straight at the head of a hostage.

"We have the ability to have terrorists target individual hostages," Schnurr explains, after the shootout ends in another inevitable hostage fatality. "We can set up some really hard situations." One scenario that the team is toying with is to start a level with a hostage standing on the steps of a building, targeted by unseen terrorist snipers. The player's first problem will be to locate and take out the snipers before the hostage is killed.

It's probably not a situation that the world's elite forces often come across, but *Edge* is sure they'll have a lot of fun with it come *Rogue Spear's* release in September. But only in their leisure time, of course.

The rise of Red Storm

In the best of modern mythic traditions, a homespun cure for jet lag sparked the birth of a software outfit

Red Storm is a peculiar games company. It was set up less than three years ago by two people with little experience of the industry itself.

"The story started back when I was in the Royal Navy, running UK submarine operations," explains CEO and president **Doug Littlejohns**. After suffering from jet lag on a trip to the US, he was given 'The Hunt for Red October' to help him sleep. "I finished it at six in the morning," he recalls. Startled by its accuracy, he decided he needed to meet its author, Tom Clancy, who, coincidentally, was on a book tour at the time.

"We met up in a coffee bar and clicked. I asked him if he would ever like to go aboard a British submarine and he said, 'I'd love to. I've never been on a submarine before.'" The pair remained friends, with Clancy sending the proofs for his next book, 'Red Storm Rising', to Littlejohns.

"I left the Navy in 1994 and ran Earls Court," recounts Littlejohns. "Tom started doing a computer game called SSN and he asked me to be the technical director." However, after looking at the business model, Littlejohns told Clancy that he wasn't going to make any money with it unless he worked with a dedicated games company.

A few months later, Littlejohns received a phone call. It was Clancy, asking him if he wanted to move to North Carolina and form a games company. Eventually he agreed, and Red Storm Entertainment was created on November 4, 1994. They originally wanted to call it Patriot Games but were unable to get permission.

Despite the Clancy connection, Littlejohns is adamant that Red Storm is not just Tom Clancy's games company. For instance, Red Storm has recently signed a deal with Anne McCaffrey to create a new game based on her 'Catteni' series.

As for the future, Littlejohns is ambitious. "I view the marketplace as a series of plateaux," he explains. "At the top you've got the really big guys, and at the bottom, the guys working in a garage. I don't want to get stuck in this no-man's land. I'm looking to build a big company."



CEO Doug Littlejohns



Tom Clancy



CYBERLIFE

Artificial Life will be the videogame technology of the next millennium, and at the forefront of this strange and complex science is Cambridge-based CyberLife Technology. **Edge** recently visited the company and discovered that its revolutionary *Creatures* titles are only the beginning...

As you would expect from a city housing one of the world's most respected universities, Cambridge has seen its fair share of scientific glory. Isaac Newton came up with his most groundbreaking ideas here, Charles Darwin was persuaded to sail aboard the Beagle by his Botany professor while studying at Christ's College and, more recently, Stephen Hawking arrived to research cosmology and now holds the post of Lucasian Professor of Mathematics. It is fitting, then, that CyberLife should choose to set up here. Above a bar, looking down on the river Cam, a stone's throw away from Magdalene College, the company is currently refining its eponymous invention – CyberLife: a means of simulating the very processes and structures of life itself.

Although CyberLife has existed for around a decade under other names and

has worked on many previous projects, it was the success of *Creatures* in 1996 that gave the company its focus on Artificial Life. Understandably, the developer is busy working on several new titles in the series.

The creatures return

The first to reach the shelves will be *Creatures Adventures* – a restructured version of the franchise aimed primarily, but not exclusively, at younger players. Due for release in September, the game retains many of the features of its predecessors, including a bright, detailed 2D world filled with objects, food, birds, butterflies and plants to investigate. Here, though, interaction between the player and the Norns is simplified. There are no pull-down menus and there's no keyboard input. Norns are led around the map by the player, they can be dressed up in

different costumes and they can bake cakes using ingredients they've grown in the garden.

There are also several subgames littered around the title's 15 different areas (including a *Thrust*-style fly-about in Cloud Kingdom) which producer **Ben Simpson** justifies thus: "Adventures is designed around the philosophy of free play, the aim being to guide and teach your creatures as they experience the world around them. The product provides the building blocks for you to create their own experiences without forcing them to follow linear play patterns."

But that's not to say the title has been completely dumbed down. The technology behind *Creatures Adventures* is just as advanced as in previous titles, and Norns still mate, get sick and die (the manual includes a guide to help parents answer any questions these features might bring up). The landscape is also just as realistic, supporting a true ecosystem where spiders eat flies, flowers close up at night, and plants thrive in rainy conditions. It's just that here everything is more obvious. When the Norns are hungry they rub their stomachs; when they're ill they get spots on their face; when they're pregnant their stomachs swell up. In fact, *Adventures* will perhaps serve as a great introduction to AL for anyone who finds the abstract complexity of *Creatures* overawing.

Next up will be *Creatures 3*, heading for a November release. The third iteration, the action is now set aboard a huge spaceship owned by a superior race named the Shee, who, according to *Creatures* mythology, originally bred the Norns and the Grendels and left some of them on the worlds that you've seen in the first two instalments. The spaceship is essentially a gigantic breeding experiment,



Creatures Adventures features a simpler, more visual interface than previous titles in the series. Younger gamers are therefore a key audience





■ Toby Simpson



■ Ben Simpson

"ADVENTURES PROVIDES THE BUILDING BLOCKS FOR YOU TO CREATE THE CREATURES' OWN EXPERIENCES WITHOUT FORCING THEM TO FOLLOW LINEAR PLAY PATTERNS"

BEN SIMPSON, PRODUCER, CREATURES ADVENTURES

with four separate areas or 'Terrariums': the Norn Terrarium, the Grendel Terrarium (replete with pools of Norn-eating piranhas), an aquatic area and a desert area populated by the Ettins, a third species introduced in *Creatures 2*. Each area has its own indigenous wildlife and food chain, which players can mess up by transporting species from one place to another (with interesting ecological consequences). Norns have direct access to each of these areas, of course, as well as the ship's bridge and engineering dept so they can interact with dozens of objects, food types, gadgets and wildlife species, just as in the previous title.

There are many additions, however, as producer **Toby Simpson** explains: "The Norns in *Creatures 3* have a whole new brain. This improves their memory considerably, and makes enormous advances in the brain's ability to learn the difference between positive and negative actions. The whole system – brain and biochemistry – is now in floating point, providing a broader dynamic range and considerable performance increases. The creatures' goal direction and navigation system is now based on smell – allowing a creature to find the shortest route to a target, even if the target is moving, and the route itself changes continually. Several new genetic structures remove some previous limitations, and creatures have had their internal organs and chemical systems rebuilt from scratch. One particularly exciting development is the addition of new brain lobes and structures that provide the potential for social behaviour, so creatures can learn the difference between a positive acquaintance (friend) and a negative one. A side-effect of the social brain lobes is that parents are now able to pass their knowledge on to their young."

Those who criticised the last two instalments as largely passive experiences will perhaps be more interested in the new 'connection' agents. Strwn about the



Creatures 3 uses a much more interactive environment, allowing users to create complex machines

Terrariums are various gadgets that can be connected up to other objects to create complex mechanical systems. Connect a sludge gun to a Grendel Detector, and it fires any time one of the lumbering beasts gets near. Connect a Norn smell-emitter into an airlock, wait for a Grendel to come along (they're attracted by the odour) and then blast them out into space. You can also set up alarm networks to warn of approaching monsters or lurking diseases: "We also provide some low-level building blocks such as 'or' gates, 'and' gates, 'not' gates, counters, delays, etc," adds Simpson. "You could theoretically build a working computer out of the parts."

This detailed new element not only adds to the gameplay, but it should also widen the user-exchange element of the titles. Already there are thousands of users on the Internet, swapping Norn DNA and creating their own agents; soon it will be possible to save blueprints of huge, complicated machines and swap them online. It rather puts shooting opponents in *Quake III* tests into perspective.

The beasts within

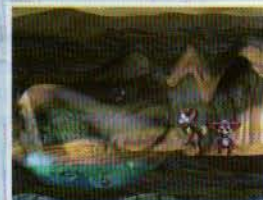
To date, CyberLife has restricted itself to variations on one theme: *Creatures*, which, like *Sim City*, is more of a highly complex toy than a game. However, the developer's latest project – still in its planning stages and going under the

The creatures' progress

Creatures (1996)



Creatures 2 (1998)



The original *Creatures* is an incredibly advanced AI toy – a sort of grown-up Tamagotchi: Users are given control over a race of creatures called Norns who wander around a 2D landscape, littered with food, toys, lifts and transporters – all of which they can interact with of their own accord. And Norns are actual living creatures – they have simulated blood systems, instinctive drives and rudimentary brains employing advanced neural network technology; they don't rely on scripted behaviours, they learn from their actions in ways that even the programmers can't fully predict. They can even mate, donating their coded DNA to the resulting progeny. The player's role is to help each Norn navigate the world, to keep them amused, and to simply watch. If the critters do something wrong, you can use the cursor to slap them; if they do something well, give them a tickle – in this way you train and modify their behavior. Oh, and you must keep them away from Grendels – ugly, disease-carrying beasts who love to pick on their cuddly neighbours.

working title *Beasts* – is a move into new territory. Producer **Chris Bamford** enthuses: "The main aim is to take the cool technology of *Creatures* and use it for something mainstream gamers will really go for – something with danger and action, with a clear goal, but without only one way of achieving that goal."

In other words, CyberLife is finally creating a traditional game, based around its core AI technology. The cutesy Norns have been dropped, though – CyberLife quite rightly assumed that hardened *Quake* and *TA* fans would balk at controlling cuddly teddy bears. The fantasy world setting is also out the window – *Beasts* will be very much based on earth



■ Chris Bamford

"THE MAIN AIM IS TO TAKE THE COOL TECHNOLOGY OF CREATURES AND USE IT FOR SOMETHING MAINSTREAM GAMERS WILL REALLY GO FOR – SOMETHING WITH DANGER AND ACTION"

CHRIS BAMFORD, PRODUCER, *BEASTS*

as we know it. However, the dev team still wanted their game to be based around fictional creatures – mostly to avoid wrangles about behavioural authenticity. So two provisos were set: they had to be plausible, and threatening.

Looking into myth, legend and anecdote for inspiration, the designers settled upon the idea of using the yeti – a primate beast rumoured (at least by impressionable climbers and the odd local) to wander the Himalayas. Here, then, players get their own troop of Yetis which they must guide through a series of challenges (there are 12 at the moment), each set in a different area of the map. Some involve battling other animals, some are based around fighting rival Yeti tribes looking to expand their territory, and others have your group rampaging through human villages scaring the bejesus out of the locals so that they don't encroach on your mountain realm.

The catch is – as with the Norns – you cannot directly control these creatures. They are artificial organisms with their own simulated brains, biochemical systems, instincts and urges: "They are

more responsive than Norns," publishing director **Howard Newmark** points out, "but they're not as subservient as *C&C* units. Imagine a tank that says, 'Fuck off. I'm not doing that, it's suicide,' and you're on the right track."

Creature comforts

Consequently, as in *Creatures*, you have to influence your tribe through a punishment and reward system. In place of the old slap and tickle interface you get a pull-down menu listing a number of emotional stimulants – anger, fear, pain, calm, curiosity, etc – which must be administered via injection to promote relevant behaviours.

For example, if a human being or Yeti from another tribe is around, inject one of your Yetis with aggression and hope that he starts a fight with the bad guy. If he does, inject him again with happiness and he'll remember that baddie-bashing is good. You can now count on him in a scrape. To affect your troops on a wider scale you can drag the cursor over a group of Yetis and 'bomb' them with the desired emotional chemical so that they all react. The only problem with this tactic is that you can't direct *how* they react – cover your whole tribe in aggression and they may just start kicking seven bells out of each other rather than looking for another tribe to take on.

But it's not all about manipulating these poor beasts into battle. As with the Norns, they have to be taught and nurtured. You have to make sure you've always got an equal ration of males and females, and you've also got to instigate a strict breeding program, keeping the weak, sickly males away from copulation at all costs – or risk infecting your tribes' gene pool with their infirmity. Interestingly, the beasts have advanced social skills and will quickly form a tribal hierarchy based on strength and aggression – something the designers have instigated after studying real-life primate behaviour. They also



CyberLife's Origin technology enables the team to create hugely realistic ecosystems

recognise members of their own tribe by smell, and can be taught to attack those who don't share it

Importantly, *Beasts* also marks a visual landmark in CyberLife history – it uses a 3D engine. But why the long wait? Bamford explains: "The move from 2D to 3D involves quite a lot of issues over and above the obvious one of rendering technology. The visual engine has actually proved the least of worries. Navigation, for example, is something we've had to work out new solutions for – beasts now have to think and path-find in three dimensions and cope with intervening hills and so forth, for instance. So our answer was to create a navigation system that, in principle, works a bit like smell. Interesting objects like food give out a smell that slowly spreads through the world. Beasts can follow the trail, homing in on the area of greatest concentration. We've also had to implement a complete physics engine, to cope with our 3D worlds."

Essentially, *Beasts* is a realtime strategy game, but with units that have a life of



Hoping to appeal to mainstream gamers, the Yeti tribes in *Beasts* are much more aggressive than Norns. The gameplay should reflect this



"THE YETIS ARE MORE RESPONSIVE THAN NORNIS, BUT NOT AS SUBSERVIENT AS C&C UNITS. IMAGINE A TANK THAT SAYS, 'FUCK OFF. I'M NOT DOING THAT, IT'S SUICIDE'"

HOWARD NEWMARK, PUBLISHING DIRECTOR

■ Howard Newmark

their own – units that are susceptible to the ravages of genetics and the seasonal whims of the world around them. As in the *Creatures* titles, the Yetis' environment is a true ecosystem: if there's a drought, the amount of food they can harvest diminishes, placing the tribe in jeopardy before they've even begun engaging their enemies. Ultimately, then, the game should require a whole new set of skills and tactics from RTS veterans – a factor the genre will surely benefit from.

Virtual actors and holodecks

CyberLife – the AL code behind the Nornis, Grendels, Yetis, etc – is not this company's only proprietary technology. Origin is a brand new software architecture (or environmental modelling system) which allows teams to create 3D worlds rich in ecological realism. Seasons and true physics can both be built into Origin domains, which can then be filled with 'agents' – living things built using AL code. These agents, whether they're plants, birds, horses, or humans, will then exist in the world as sentient beings, conforming to a totally naturalistic food chain.

Beasts is the first title to use the system, but CyberLife has even more grandiose plans for both its AL code and Origin. Not only is the next *Creatures* title set to use the new 3D technology, but CyberLife is also looking into creating a sustained online multiplayer game – one which can be customised and mutated in realtime, by its inhabitants; one that provides a landscape in which everything you see is alive and autonomous and where computer-controlled characters are virtual actors who contribute their own



***Beasts* (working title) is essentially an RTS – the expansion of the tribe's territory is the main aim**

personalities and unpredictable whims to the proceedings. When pushed to give a theme or plot to this vision, Toby Simpson is evasive – he doesn't want to restrict players in the way that, say, *Everquest* and *Ultima Online* do.


"Ultimately, one of the things we wish to do is to put a holodeck on your desktop," he says. "We want to be able to create an environment where you can do anything, any time, with anyone – creating environments for entertainment that are so real that suspension of disbelief occurs all, or at least most, of the time. We believe that such worlds are impractical without a sound, bottom-up development approach. Origin allows us to consider the creation of shared worlds where everyone is in the same space, rather than having to run many different smaller copies of the same world. We're after virtual soap operas, where players become part of the story rather than an observer of it, and where stories and associated game assets are dynamically created by the players themselves."

The diversity of A-life

CyberLife Technology is actually made up of three departments. The game development section, named CreatureLabs, is just one part of the equation. These are the other two

The CyberLife A-life Institute A sort of AL think-tank headed up by Steve Grand, creator of *Creatures*. "They are in charge of our Blue Sky research into A-life and where it can be taken," explains publisher **Howard Newmark**. "Their ultimate goal is what we call the 2020 Vision – that is, to have artificial organisms with human intelligence by the year 2020."

CyberLife Applied Research Takes the concepts filtered down from the Institute and applies them to real-world projects. The team is currently conducting research into pilotless aircraft (or UCAVs – Unmanned Combat Air Vehicles) for the ministry of defence, and has also been employed by NCR to do research into retail and banking environments. For the latter, Applied Research actually creates a CG model of a building design and floods it with simulated customers, using the same core AL data found in *Creatures* – the purpose being to see where customers head first, and where the bottlenecks occur. "It's a lot cheaper and easier, not to mention safer, to model [these areas] in software before trying them out in the real world," says Newmark. The group is also carrying out medical research, synthesising the behaviour of the E-Coli bacteria using AL organisms.

The concepts are blurred at the moment, far-fetched even. But CyberLife has been pushing the unknown for the last three years. One thing is for sure, though, realistic 3D environments are among the hottest area of game design at the moment. If Simpson *et al* really can begin to develop worlds where each tree, animal and computer-controlled enemy has its own agenda, its own set of priorities and a very real relationship with everything else in the world, they have the future in their hands. Virtual reality would arrive. It would be game over. 



Colin McRae Rally 2

The world's most playable rally game is about to get a sequel. Again, it's being done by worldclass codeshop Codemasters. Again, it features one of the world's best rally drivers. Edge fastens its seatbelt and takes a look

As anyone who has followed the rally scene for the last five years will tell you, Colin McRae doesn't pull his punches. Undeniably one of rallying's most intense – and gifted – personalities, everything he does is done with absolute, unshakeable determination. Everything. When Infogrames sponsored this year's Rally of Corsica, for example, McRae allegedly refused to get into his Ford Focus (the team McRae joined after leaving Subaru, and a car making a remarkable first appearance on the World Rally circuit this season, respectively) until the offending *V-Rally 2* stickers had been removed. At no stage was there a question of compromise. Those were simply his terms.

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"We've done a lot with the suspension of the car - we have proper independent suspension on all four wheels"

Guy Wilday, producer



Guy Wilday: "Rally drivers always laugh about Formula One because they think Formula One is the easy life"

McRae's new car, the Ford Focus, sporting the Martini livery associated with the rallying Lancias of the 1970s and '80s



Codemasters is not known for compromising either, particularly when it concerns the quality of one of its games. So it comes as no surprise, perhaps, that McRae's involvement with the company, following the partnership's superlative first outing into the rally field with 1998's *Colin McRae Rally* (9/10, E61), is very hands-on.

"[He's] very keen - he's had a whole lot of comments to make, as has Nicky Grist, McRae's co-driver," says **Guy Wilday**, producer on *Colin McRae Rally* and now its sequel. "When we went out to Barcelona and spent a couple of days testing with him we did all sorts of things; we talked through the whole testing process - we took a PlayStation to the hotel bar, plugged it into the TV and it was sort of Colin and Nicky and me all playing *Colin McRae* and criticising the mechanics and stuff. It was all a bit surreal, as you can imagine, but you get a lot of suggestions about the mechanics, about the different surfaces, how things should work, and we've been taking that on board. It was an opportunity for fine tuning, and he was very keen to do that. Nicky's also made some comments about the special individual features of the countries and the way they look, which we're planning to do as well.

Handling with care

"Certainly, from Colin's side, the car is his thing. You know, the car handling is his whole area of expertise, and that's really what he's been focusing on - he's very much helping to get the car to drive properly. He took me in the car to give me an idea of what it really is like in comparison to what we're doing! It's been good, and we'll continue to send him revisions throughout the process to get a

feel for where we are, if we're going in the right direction."

This is not dissimilar to the input McRae had on his first polygonal entrance into the digital realm. In fact, getting McRae to collaborate isn't difficult at all - it's getting hold of him that proves somewhat troublesome. "It's all to do with timescales with him, unfortunately," laments Wilday. "They have a really gruelling schedule. I mean, they start January and it goes through to November. I think they have June or July off and that's it apart from December, and, obviously, they're testing throughout that period anyway. We had some feedback on the first game and again we had some mechanical input about how things were looking that we managed to implement, but meeting and sitting down with him and playing the game is something completely different. And then having him taking you out in the car and saying, 'This is what I was talking about, you know, when you get the car sideways it's like this', it's very different from him saying, 'You want to be doing this.' It's enabled us to get the handling much more polished."

The handling was undoubtedly *CMR's* masterstroke. Marrying realism and playability only previously seen in *Gran Turismo*, it



All of the shots on these two pages are PlayStation. The visual improvement over the original game is clear

Now cars roll more realistically, spoilers can be knocked off, boots smash open and continue to flap, and rear bumpers can drag along the ground



Format: PlayStation/PC

Publisher: Codemasters

Developer: In-house

Release: April

Origin: UK

A lot of work has gone into making the stages look more authentic. The English stages, in particular, with their pubs (left), and tricky B road complexes (right), are convincingly accomplished. Other countries' sceneries promise to be as accurate

catapulted the rally genre into the limelight. All of a sudden, everyone was seemingly working on a 'realistic' rallying game. Of course, *CMR 2* is not without its share of realistic dynamics. "The mechanics is one of the things we were probably most sensitive to changing – it's the bit that everyone thought was good and was something that we had to look at. We still want to take it further," reveals Wilday. "We've done a lot with the suspension of the car – we have proper independent suspension on all four wheels, the car over-jumps, and things will rebound far more realistically. Colin is notorious for taking off sideways over jumps – you see some really dramatic shots of him midair, one wheel pointing at the ground, all that sort of thing. We can do all of that.

"We've managed to get hold of some Ford telemetry. We've forged a good relationship with them already – we've been testing

with the team, which was useful – they've sent us some telemetry – some real Ford equations – that we're using. We put them straight into the mechanics model and it worked first time," continues Wilday, highlighting the increasing collaboration between car manufacturers and racing game developers.

Naturally, the authenticity extends to other areas of the game. Notably, the 400-polygon car models of the first game have now been boosted up to a figure approximating the 700 mark on the PlayStation version. Details such as a full complement of working lights (including hazards), radio telemetry transmission aerials, semi-transparent windows which allow you to catch a glimpse of the drivers in action, spark effects, and a new reflection map technique that gives the cars the appearance of realistic paintwork are just part of the all-improved package. Look at the original and

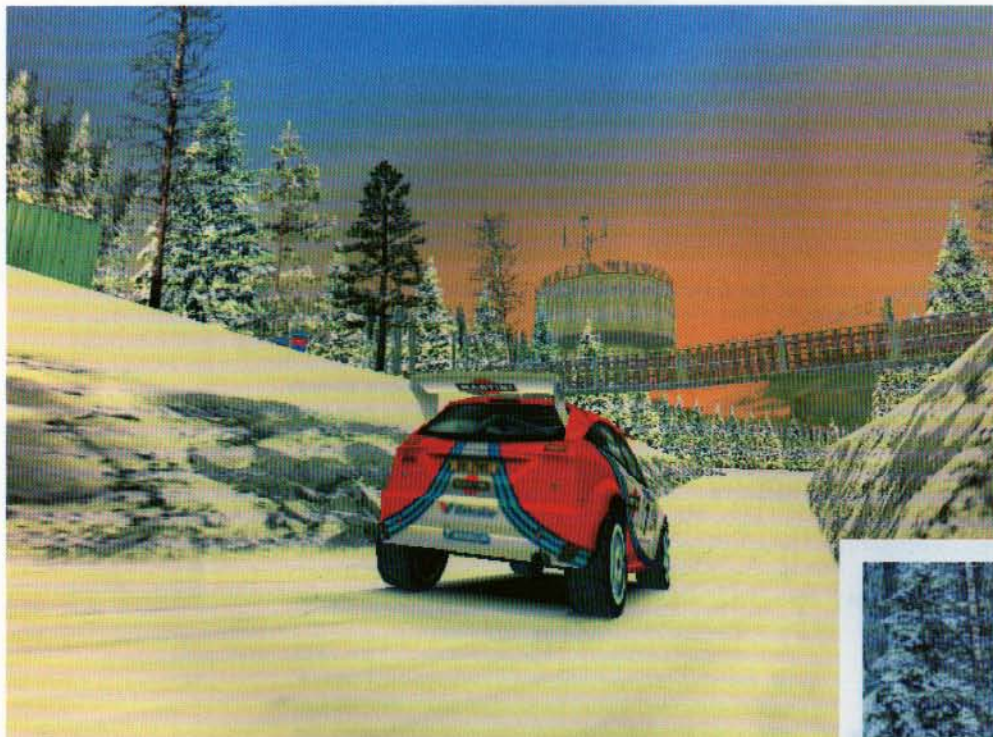


Twenty-eight individuals are already working flat out on *CMR 2* (top). At its height, *Colin McRae Rally* only had 26



The behaviour of the cars on Tarmac has been radically improved, with grip levels now approximating the way real rally cars stick to the road – you can thank McRae for that

"We really struggled for reference last time... so this time we've taken quite a big step: we've visited the particular countries and taken photos"



The PC version (shown on this two-page spread) boasts increased resolution and 32bit textures. Some features such as spectators running away from cars should make both versions, though



Every other WRC car will also feature, of course

its developing sequel simultaneously and the overall enhancements are instantly obvious.

Opportunity knocks

The whole damage issue, an integral part of real rallying, has also been brought up to scratch. Bodywork dents as previously, but now cars roll more realistically, spoilers can be knocked off, boots smash open and continue to flap as your car bounces around the uneven road surface, and rear bumpers can become partially dislodged, dragging along the ground only to be torn off following a particularly heavy landing, for example. It's early days, of course, and the possibilities are numerous, as Willday will be the first to admit. "We've looked at the whole damage area," he says. "Losing wheels is an interesting point because it's got real gameplay implications as well. I mean, if you lose a wheel the stage is over, if you like. Okay, it's not over, but you're going to have to limp to the end, and you lose so much time that, as I say, to me that comes down to playability, and it's something that you've got to play with to see how it works."

Of course, the cars aren't the only thing the team has focused on. More countries second time around denotes more tracks, and



Fictitious tracks give the developers complete control over the design, resulting in a thoroughly exciting drive

the visual improvements are vast. Load up an England Tarmac stage, for example, and witness road signs, phone boxes, pubs, roundabouts and splendid stately houses whizz by as you hammer through treacherous B roads. "We really struggled for reference last time – we had a lot of problems with a lot of the countries," admits Willday. "So this time we've taken quite a big step: we've sent people out and visited the particular countries and taken photos, and that's primarily been done for the PC version where we're using 32bit textures. We're basically using the 32bit textures as a basis and generating the PlayStation ones from those."

Lessons from the past

This last comment is indicative of a major shift in the development of this *Colin McRae Rally* sequel. "Last time,



"We're considering both platforms separately, because the PC has moved on so far, and you can't just do a PlayStation game and shift it across any more"



The weather effects are now pseudo-dynamic: start a stage and rain can begin falling halfway through. It won't affect the handling, as the stage is likely to have been wet already (it isn't possible to pit in for wet tyres as in F1), but it's a neat touch

we were only based on PlayStation – the PC was ported across and then we tried to enhance it," Wilday says. "We're taking a bit of a different approach this time – we're trying to consider both platforms separately, purely because the PC has moved on so far, and you can't just do a PlayStation game and shift it across any more."

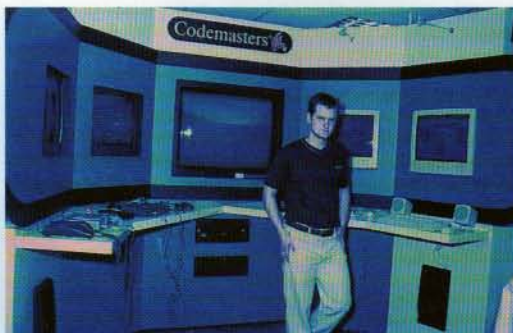
The process involved regarding certain elements, such as the game engine, retains similarities, however. "We've certainly done a lot of work and we've taken what we had before and built on it," offers Wilday. "We have rewritten whole sections of it... what we've tried to do is look at the areas of weakness and improve them so that it's a dramatically enhanced engine. On the PlayStation we've done a lot of work with the Performance Analyser and we found some techniques that enable us to use a more detailed car running at the same framerate. It's the same with the PC – we're working with the cars a lot better, we're trying everything to go as fast as possible."

At this stage, Wilday was apprehensive about disclosing anything regarding a possible Dreamcast port, simply saying there were "no plans at the moment." **Edge**, however, would hope that Codemasters reverts its 'policy' on Dreamcast development should the console prove successful. After all, owners of Sega's 128bit hardware simply shouldn't be denied what may turn out to be one of the finest rally games ever made.

Given the original's astounding popularity, and as videogaming enters the mainstream, **Edge** wonders if McRae realises what he's let himself in for: "Obviously the success of the first game has pleased him," states Wilday. "He's very happy. I know that people

have been coming up to him with copies of magazines and all sorts of things for him to sign, so instead of signing T-shirts and stuff he's signing games mags now."

Building on the strengths of its illustrious predecessor, *Colin McRae Rally 2* refines all of its already lauded aspects, promising to deliver an experience as immersive and utterly captivating as before. Only better. And that's at least nine months before you'll see it at your local software emporium. Which, needless to say, is very impressive going from the 28-strong team currently striving forth with absolute, unshakeable determination. Not unlike McRae's driving, then.



Rally man: Codemasters' Guy Wilday, producer on both McRae projects, shows off his ideal gaming setup

H O O R A

H O L L Y

AS GAMING HEADS INTO A NEW ERA, TWO BASIC PRINCIPLES, STORY AND EMOTION, LOOK SET TO REDEFINE GAME DEVELOPMENT. CAN GAME CREATORS LEARN MUCH FROM THE CLASSIC CINEMA MODEL? **EDGE** INVESTIGATES

No. Luke. I am your father." Darth Vader's infamous pronouncement has the cinema audience on the edge of its seat in 1980. Spines are shivering. Some people can't believe it. One child starts crying.

Is it any wonder, then, that the whole world is now tuning in to hear young Anakin Skywalker's story? Sure, we know that there will be amazing special effects if we go to watch 'Episode One: The Phantom Menace'. But, more importantly, ▶

Y F O R

W O O D

What would happen if interactive gameplay was fused with visuals and storytelling as strong as in a Hollywood movie? And what stands in the way?



we'll learn more about a universe we've grown to love and the history of the characters we care about. And, for all its cult status, 'Star Wars' is pretty straightforward blockbuster fare. It's certainly not 'Apocalypse Now', let alone 'Saving Private Ryan'.

From 'Citizen Kane' to 'Pulp Fiction', from 'The Wizard of Oz' to 'The Matrix', 'It's a Wonderful Life' to 'Whose Life is it Anyway?', mainstream, five-bucks-a-ticket Hollywood has delivered 60 years of tear jerkers, heart-warmers and films that change people's lives. In contrast, in its 25 years, the videogame industry has come up with *Doom*.

Okay, there a couple of honourable exceptions (*Tamagotchi* and *Final Fantasy VII* most obviously), but, essentially, videogames have got no further than putting the wind up gamers, and the vast majority don't even manage that. For every *Resident Evil*, there are a hundred successful sons-of-Robotron who live by adrenaline alone.

For many gamers, that's sufficient. The interactive movie, the cut-scenes of *Wing Commander*, even the Simple Simon-esque sections of the upcoming *Shenmue* are warning enough.

Games are games, after all, and we should be happy for that. But what would happen if interactive gameplay was fused with visuals and storytelling as strong as in a Hollywood movie? And what stands in the way?

It was an intriguing enough proposition to prompt the venerable BAFTA earlier this year to hold a seminar entitled 'When Games Go to the Movies'.

Sir David Putnam, Lionhead's **Peter Molyneux**, Rebellion's **Jason Kingsley** and film industry insiders **Bill Scanlon** and **Steve Nesbitt** all met to explore what gaming can learn from its older sibling, cinema – and what it would do best to ignore.

"Computer entertainment – what we call 'games' now – is changing to become a real entertainment medium," Molyneux explains. "Because of that, the skills that we need are just terrifying. Not only do we have to make a great game now, but we have to make that great game with emotion, with morals and with great cinematography.

"We technically know how to put these sprites and polygons onscreen, but we haven't even begun to think about the emotions we're trying to portray in our games and what we're leading people into."

Such talk from a 'game developer', coupled with emerging technology such as Sony's Emotion Engine suggests the curtains could be soon be closing on the first act of videogames. But what can you

hope to see when they part again? And who will be taking all the credit?

The land time forgot

Compare a movie with a videogame and the yawning gulf between the mediums is immediately clear. It's not just cinema's rich emotional content – it's more superficial than that. While even your mother might now recognise *Gran Turismo* as a game involving cars, the visuals of, say, *Zelda* or *Hidden and Dangerous* still fall way short of even animated fare like Disney's 'A Bug's Life'.

What's often overlooked by pessimistic pundits is that movies started humbly, too. The Frenchman Louis Lumiere is credited with inventing the motion picture camera in 1895; mechanical devices had already set the tone for early moviemaking. Lumiere mostly produced dull three-minute documentaries of picnics and the like, but most picturegoers went for quicker, visceral thrills.

"The film industry started as a fairground attraction," explains Putnam. "That's where the technology seemed to be best equipped to deal with the limitations of early film makers. For the most part it was exploding policemen, boxing kangaroos and cops chasing each other around in circles."

Just like games are now, moving pictures were pigeonholed as an amusement. Cynical game developers look out; as the medium progressed towards 1920 with the American DW Griffith's 'Birth of a Nation' and Abel Gance in France with 'Napoleon', the inventors of motion-picture technology were dismissive and even hostile of the



While games have produced their own 'stars', such as Lara, Cloud and Sonic, the art of storytelling and evoking real emotions is still largely the preserve of the cinema format. This could be about to change as the 128bit era approaches



LARA CROFT
The female hero of the Tomb Raider series has been re-created as a movie star in the new video game Tomb Raider: The Last Revelation. The character is being played by actress Rebecca Judd. She was also the first female character to be created for the Tomb Raider series.

Cynical games developers look out.

The film industry started as a fairground attraction.

Like games, then,

moving pictures were
pigeonholed as an amusement



emerging art form. They were also quickly sidelined.

Within 20 years, cinema had become so potent that American president Woodrow Wilson described it as 'watching history written in lightning'. Wilson founded The Motion Picture Association of America to ensure the US would dominate the cinema, and sell 'The American Way' to any foreign nation of cinemagoers.

Putnam believes videogames have reached the same juncture: "What's needed now is the next big move into narrative, into emotions, into something far deeper and more important and possibly more fulfilling than the industry has challenged itself with so far."

Sex, lies and DVD

It isn't prescient to say games are going to ape skills from the movie industry – it's happening. Titles like *Half-Life* or *Metal Gear Solid* would be unthinkable without the inspiration and understanding of action films. Improving visuals – particularly 3D graphics and the arrival of the external camera in games – has driven these cinematic incursions.

Metal Gear Solid creator **Hideo Kojima**'s ambition is to direct movies. He freely admits to the huge debt he owes to film, from the camera work and lighting in his games, to his homage to films like 'Escape from New York' and '2001'. "You know how humans are 70 per cent water? I am 70 per cent movies," he only half-jokes. Kojima-san believes games are serving the same function for today's youth as movies did for his generation. A view shared, incidentally, by Putnam.

Metal Gear Solid is surely the most cinematic game yet made. But, like *Final Fantasy VII*, most of the zooms, fades and cuts take part in the lengthy prerendered sequences. A crucial step will be to incorporate similar techniques into the interactive sections of the game.

"Camera freedom has previously only been possible at the expense of graphics," says **Charles Cecil** at Revolution, who recently revealed to attendees of the Develop! conference (see p60) 'The Big Story of the 128bit Revolution'. "The arrival of PlayStation 2 will allow us to control the camera while displaying very high-quality graphics."

Cecil is at pains to stress that the search for 'emotion' shouldn't come at the expense of gameplay. But better camera work is a must, whichever direction the industry takes.

"The camera as conceived by *Mario 64* and *Tomb Raider* reflected the excitement of what we could do in an interactive environment," he says. "It

didn't matter that it broke all the rules of cinematography. But in the new age it will be too crude. We have to learn our own art of cinematography."

Scanlon's The Film Factory created the special effects for sci-fi blockbuster 'Lost in Space'. While he's used to working with the very best of equipment, he's still impressed by the possibilities opened up by Sony's PlayStation 2, predicting the games console will ultimately be 'the future of home entertainment'.

"If it does anything close to what they promise, PlayStation 2 is going to allow graphics in real time superseding what I would have thought good for animated TV content," he says. "Soon games companies will employ scriptwriters, digital cinematographers, performance animators, post-production and visual effects supervisors. These talents will enhance the stories and the characters to provide a truly immersive experience."

The problem will be paying for it. The ten minutes of special effects footage in



Despite the accomplished animation that is being celebrated in *Black and White* (left), Disney's feature film *A Bug's Life* (right) far outstrips its achievements in terms of quality and atmosphere

"What's needed now is a move into narrative, into emotions, into something far deeper and more important than the industry

has challenged
itself with so far"



Sir David Putnam



'Lost in Space' took a fluctuating team of between four and 30 people 18 months and \$3.5 million to create. That's about the cost of developing a game. Even with powerful realtime technology like PlayStation 2 (or its successors), this new vision of Hollywood-level graphic fidelity isn't going to come cheap.

Nesbitt is part of Kickstart Films – a new studio that has made arrangements with *Aliens Vs Predator* creator Rebellion to develop feature films and computer games in tandem. He stresses that developers shouldn't necessarily think in terms of the photorealism that excites Hollywood. "Developers must get away from the stereotype that they are creating for themselves by relying on the most convincing, or the most highly rendered, blink of an eye," he says.

"It's digging a grave, genre-wise. Use the interactivity to create some alternative form of the suspension of disbelief to that which the movie industry relies on. The easing in of film business skills won't

happen with visual effects," he predicts. "It will happen instead with the use of narrative and cinematography."

Videogames killed the movie star

"To make a great movie you need three things," said the late, great director Alfred Hitchcock. "A great script, a great script and a great script."

After the debacle that was the interactive movie, there is probably a diminished appetite for Hitchcock's maxim in the games industry today. But remember, it was mainly Hollywood – not game developers – that gave us the interactive movie. What if game developers find better ways to tell stories that suit games, and weld it to interactivity, like Square's latest *Final Fantasy* titles?

Cecil says developers must strive to wring emotion from the audience, just as Walt Disney once dreamt of making the first cartoon that would make people cry. Rather than looking towards movies for

inspiration, developers need to clear their heads of the tricks of film.

A movie can set up a scene in which the audience sits on the edge of its seat wondering if a concealed bomb will destroy the movie's hero. By contrast, any gamer would feel pretty short-changed if he wasn't given the opportunity to simply get away from the explosion. Aren't many of cinema's strongest narrative tricks effective exactly because the viewer isn't in a position to change the outcome?

"Movies have learned lots of techniques that suit their medium," admits Cecil. "That example works because our empathy for that character makes us care whether or not he gets blown up. In an interactive gaming environment we have the opportunity to build a different type of empathy with our characters. In many ways we should be able to identify more closely with the character under our control."

Again, it seems the Japanese lead the way here. According to Molyneux: "I know for a fact [that Square] employs psychologists to help it decide when to introduce certain elements into the game.

"Showing people blood and gore is relatively easy," he continues. "What is far more difficult is to make them really care about things so they don't want everything killed and blown up – and that means we do need psychologists and others with similar skills.

"I don't think seeing something blow-up frightens people – that's just the payoff. Instead, 'what is going to happen next?' is frightening. It can be terrifying to know that there's a splinter in the floor if you've got no shoes on."



Cost is one of the major concerns facing developers. At \$20m, *Shenmue* (left) is one of the most expensive games to date, while just ten minutes of a film such as 'Lost In Space' (right) costs \$3.5m

"We know how to put sprites and polygons onscreen,
but we haven't even begun to think
about the emotions we're portraying in our games
 and **what we're**
leading people into"



Peter Molyneux

The never-ending story

According to Cecil, a satisfying gaming experience comes from a combination of traditional storytelling elements like visuals, story and sounds, and the newer mechanics of gaming.

Metaphorically speaking, games need to show Molyneux's splinter on the floor, but leave you to wonder exactly where it is – and how to avoid it. That's the essential difference of games compared to films: interactivity and unpredictability.

"If you run down a corridor away from an alien and turn left, something will happen that wouldn't have happened if you'd turned right," says Kingsley by way of illustration. "If you play the game twice and run down the same corridor twice, you might not see the alien a second time. An interactive product, a game product, isn't a linear narrative, [ideally] it may have a branching narrative or an infinite number of branches."

What the film industry can't seem to grasp is the compound effect on budgets of each non-linear branch, particularly if you're using traditional Hollywood techniques and yet still hoping to produce a vital interactive experience. The maths can begin to look daunting.

"If you're going down the route of pre-designing each of those sequences and if it branches every three minutes... well, I don't know what that cost comes to, but it's a huge amount of work," says Kingsley.

So how can we get Hollywood's empathetic characters, storytelling and emotions? Does every developer in the world have to get to work on the same two-hour-long game?

"We have to get programming teams

to make characters that react depending on what you do as a player," explains Kingsley. Like a great novelist, a developer's characters must literally come to life.

Of course, there are limits, as Kingsley discovered when making *Aliens Vs Predator*: "The predators and aliens all have their own intelligence. The problem was that when we started they all killed each other, so you were left to wander around gore-filled corridors. They were much more efficient at killing each other than chasing you. It was a bit like watching a disaster movie after it's all over."

21st Century box office

At the height of Hollywood's incursion into videogames at the start of the '90s, a certain British developer was invited to an awards ceremony in Los Angeles to present a prize to one of the blighted products. To show just how hip and hi-tech Hollywood was, the awards ceremony used a freshly manufactured

Apple Newton to relay the winners to the announcer on stage.

It was worse than a gimmick. The developer found that when he arrived on the podium, the Newton wasn't even switched on. Stickytaped across its display was the winner's name. It stands as an apt metaphor for Hollywood's botched attempt to appropriate the bare bones of game technology and slap some content on top.

This time it's different. Games are evolving beyond our expectations. Developers are coming up against the limits of their skills and looking for answers. Public outrage at the nihilism evident in many games may even make a concession to morals and emotional content a must. And technology is slowly (so slowly) making the impossible possible.

Interactive movies made gamers cry, but for all the wrong reasons. The next time you're weeping over a console, it might just be for the very best ones.



Shinji Mikami, creator of the *Res Evils* (left), claims to be inspired by films such as 'Night of the Living Dead' (right). Narrative devices such as fear and suspense are still relatively new in games, however

New studio line

How they do it in Hollywood

"Because he had been a head man for so long and so many apprentices had grown up during his sway, more knowledge was attributed to him than he possessed. He watched the new processes of faking animated backgrounds with a secret child's approval. Thus his function was different from that of Griffith in the early days, who had been all things to every finished frame of film."

The Last Tycoon, F Scott Fitzgerald (1940)

Hollywood might teach developers more than how to make smiles or tell stories. Just as the creative side of the film industry took years to reach 'Gone with the Wind', so the current Californian money machine took more than half a century to fine-tune.

Lone creative mavericks dominated early 'film' making. It wasn't until the late 1920s that Hollywood's studio system hit full steam. Motion pictures by legends such as Frank Capra ('It's a Wonderful Life') and Victor Fleming ('The Wizard of Oz') were made during a regime of complete studio dominance. Stars such as Humphrey Bogart, Shirley Temple and Gary Cooper, and even directors such as Fritz Lang and Elia Kazan, were contracted to work full time for 20th Century Fox, MGM and the other leading studios.

Films were made on a production line. Bogart churned out four movies in 1943, but posterity only remembers 'Casablanca'. Stars were even loaned to other studios, like an empty set or camera equipment. The studios also owned the movie theatre chains around the US, guaranteeing lucrative audiences. While there are huge differences between Hollywood then and games today – chiefly the latter's reliance on technological advancement – it is the era of '30s Hollywood that gaming most resembles.

Today, in-house teams produce games under one roof, whether it is a publisher's

or that of an independent developer. And Sony, Sega and Nintendo's format ownership (which makes publishers pay to release games on their systems) is somewhat analogous to the ownership of theatre chains – which, incidentally, the studios were forced to divest themselves of in 1949 after accusations of monopolistic trading.

Hollywood's studio system finally dissolved in the '50s in the face of the growing status of directors, the freedom of stars to pick their own projects, and the rise of television. Today's blockbusters are put together not by huge companies, but by loose-knit teams of free agents – from actors and cameramen to special effects experts, set designers, the casting team and the caterers who make the tea.

The studio's role is primarily to kickstart the movie, fund it, and to take the biggest cut of the profits. Studios like Paramount or New Line have few internal titles in production, and concentrate instead on rights acquisition and exploitation.

Many observers suggest that a similar shift is coming in the games industry. The increasingly specialised roles required for game development, the scarcity of hits, the rarity of individuals with track records, and ballooning costs may all lead to games being assembled by partnerships of independent companies, if not individuals.

"Developers need to ask, 'Are we the best in the world in all areas of games

development?'" says **Chris van der Kuyl** of VIS Interactive. "If the answer is no – which for virtually every honest company will be the correct answer – then they need to ask, 'Okay, is it critical to our future success that we become the best in all these fields?' Our fundamental skill is in games development, not software, art or music."

It's a view shared by **Graham Brown-Martin**, whose Soho-based Digital Arts is already providing graphics and animation expertise to a number of players in the games industry: "The core skill of the developer is the creation of fantastic interactive ideas and brilliant computer programming that realises this idea. Without this core skill there is nothing."

But beyond that, developers are better 'sticking to the knitting'. "Having graphics, animation, sound and video teams in-house may flatter the corporate ego, but does it make good business sense when there are better teams outside that can be switched on and off as needed?" he asks.

But just as game developers should concentrate on the interactive elements of their products, so they shouldn't set themselves up as project managers any more than Sean Connery would demand to oversee the hiring of a set designer.

"If a developer is going to contract out part of the creation of a title, then they had better find someone to manage the contractors on their behalf," warns Brown-Martin. "Typically, this person is a producer. It is important that they have a clear grasp of what the developer is making and the processes that the contractor uses."

Graphic design, ingame animation and FMV, live action direction, music and voiceovers are already being out-sourced by some developers. And if professionals, like scriptwriters and psychologists, are tempted into the industry, they will be most likely to arrive on a per-project basis.

"In the future, technology and tools will be much more flexible, and a small number of engineers will be able to drive the product," predicts van der Kuyl. "But don't think that this will make things easier to manage. Just look at the credit list on a movie."



Digital Arts' Graham Brown-Martin believes that harnessing independent expertise is the future

"The core skill of the developer is the creation of fantastic interactive ideas. Without this core skill there is nothing"

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The code shop

What do videogame creators talk about when they're huddled together behind closed doors? **Edge** attended the Develop! '99 conference at Olympia to find out

As the UK basks in the sunshine and festival-goers make the pilgrimage to the greenfields of Glastonbury, a cross-section of Europe's most influential game developers heads to London's Olympia for the annual meeting of minds that manifests itself as the Develop! Conference. Now in its seventh year, this two-day event hosts a number of seminars, presentations and lectures designed to ensure that Europe remains as powerful a videogame continent as the US and Japan.



ALL TALK

Ben Gunstone
Producer, SCI



How's Develop! been for you?

Most of it's been very interesting. It's very important for people to get together and share ideas.

Did SCI take much persuading to pay for you to come here?

None whatsoever. It was thought to be very important that we attend.

What have you learnt so far?

Lots of little things. The PlayStation Development 2000 lecture was interesting – you know, would it play DVD movies, that kind of thing. The tax importing issues: the fact that DVD players are levied a higher import duty than games consoles was very interesting and information you wouldn't learn elsewhere. 'Beyond Music' was a very, very good presentation. I'm very interested in making the music for my next project as interactive as I can and The Fat Man's opinions were very valid. In fact, I'm going to have a chat with him in a minute.

How important are these events to the development community?

They're very important. We need more and more communication between the games development community as a whole. Everyone runs through the same kind of problems and I can't see why we can't meet more frequently in order to address the issues that are vital to the industry. We have to make sure that people don't leave here and just forget about what we've discussed. The Internet would be a very good forum to continue these discussions – even if it's something as basic as a newsgroup where all the people here can carry on the same conversations and theories that have been bandied around.

Develop! is less ostentatious than its stablemate, the European Computer Trade Show (ECTS), but the relationship between the two is symbiotic. Without Develop!, ECTS would be vacuous and staid, devoid of the groundbreaking videogames it regularly unearths.

Without ECTS, the watching world would know nothing of the pioneering work of Europe's brains behind the games.

Despite their common goal – that of perfecting and promoting the art of interactive entertainment – both events could not be more different. Where upwards of 40,000 people attend ECTS, Develop! attracts a few hundred. ECTS boasts thousands of exhibits, Develop! houses but three. And while ECTS secures hundreds of hours of worldwide TV coverage, not even those attending The House and Garden Fare in the adjoining hall bother to turn their heads when passing Develop!'s modestly signposted entrance.

A supervised lift ride to the third floor of Olympia's conference centre –



The Develop! seminars promise valuable technology demonstrations and insights into videogame philosophy, some of which inspire much debate

for some reason the 200-odd attendees could not be trusted to operate a lift manually, presumably because they'd start reverse-engineering it or something – initially reveals nothing out of the ordinary. One would imagine the entrance to be bathed in brilliant white lighting and carpeted with a fog of dry ice – but ignore Criterion's lone Dreamcast exhibit and MathEngine's demonstration shell and this could be a conference about gold-plated bath faucets. It's only after glancing at the agenda that the conference's remit becomes apparent.

Embracing the next generation

Split into two simultaneous streams, Develop! boasts a mix of technology demonstrations and videogame philosophy. Top of the bill is undoubtedly Sony Computer Entertainment America's Phil Harrison's tantalisingly named 'Console Futures' seminar in which, it is rumoured, he will premier the next-generation PlayStation demo video – the first time it has been shown in Europe outside of SCEA's Golden Square headquarters. It is enlightening to see that almost all of Develop!'s esteemed attendees are as excited as Joe Public would be at such a privileged showcase. The difference being, of course, that to this particular crowd it will be technology they will be able to

Technology has reached a level where frames per second should no longer be an issue. "Let your imagination go," concludes Hervé Caen of Titus

harness. You can almost feel the anticipation – it's something akin to a room full of kids flicking to the back of an autumn/winter mail-order catalogue to select the possible inclusions on their Christmas list.

In order to glean the best from Develop! it is necessary to flit between the auditorium and Conference Room One. Everyone has their own agenda, and their own particular areas of expertise. For this reason, it is disappointing to see that the streams aren't split more logically – technology in one location, opinion and vision in the other would, logically, seem the best way of ensuring that everyone can attend the sessions they'd like without being forced to choose between two similar seminars. But this is a world of stark choices, and when 'Getting the Most from Your Console' and 'Developing for a Mainstream Internet Audience' clash, inevitably there must be one loser – at least until cloning becomes something more than mere whimsical scientific endeavour.

Day one opens with a keynote from **Hervé Caen**, managing director of rejuvenated publisher Titus (rumours abound of its next acquisition, having recently secured a

significant stake in Interplay). Drafted in as a last-minute replacement for Infogrames' Bruno Bonnell, who pulled out for 'personal reasons', Caen's presence is nonetheless welcome. He opens by recounting how, when addressing a similar audience in 1987, he was asked whether Sega and Nintendo would become major hardware forces in the videogaming world. Those were the days of the home computers – which has proved to be a misnomer, as the average processing power of those systems are comparable to the more sophisticated digital watches of today – and their demise was, to

While Bruno Bonnell was unable to attend and deliver his presentation, Infogrames' Christophe Comparin is among the attendees at the event



Photography: Michael Donald

those outside of Japan, unthinkable. His answer in the negative and subsequent domination of the Master System, NES and derivatives proves how unpredictable the industry really is.

Hindsight is a brilliant thing, however, and Caen now feels much more confident in predicting industry trends. But, he stresses, the advent of new formats always claims tragedies on the development and publishing side. Realising this, he claims, is an important part of ensuring that it is avoided. Caen predicts that the major publishers now will not be the major publishers of the future. Offering nothing more concrete than that, it is certainly food for thought as each developer silently tots up how many projects he has signed up with each particular publisher.

Content over style

A theme that proves constant throughout the two days is how important it will be to focus on content rather than technology. As Harrison will suggest later, the next few years will witness an overhaul not just in the types of games we play, but, more importantly, what additional facets those games offer. It will no longer be enough to boast of frames per second, for example – technology has reached a level where that should no longer be an issue. Gameplay, Caen stresses, will be key.

Girls are a fast-growing sector of the PlayStation market. Still a statistical niche, certainly, but a niche within the size of PlayStation's audience is not insignificant

"Let your imagination go," he concludes, "and make your dreams interactive."

The following questions-and-answers session proves a little too self-centred. Obviously, a room occupied by Europe's development community will be concerned by the consolidation of publishers and the escalating development costs the next-generation machines dictate, but there is a definite hostility towards Titus and its peers. How will Caen finance these teams? Will he take a punt on a game projected to take three years – as opposed to the 'average' 18 months – to complete?

Naturally, Caen is a little hesitant, but he deflects the questions well. Manpower is not important, he argues – it is the minds behind the games. Europe, he believes, houses the best developers in the world. The business



Revolution Software's Charles Cecil lectures an attentive audience on the importance of emotion and storytelling in games in the 128bit age

model is changing and both sides of the videogame fence need to work closer to ensure that global release dates become the norm. With investment now stretching into millions of pounds per title, each publisher cannot afford too many failures. And it is only the people in this room – the "games visionaries" – that will ensure the success of the industry as a whole, Caen proclaims. Both buoyed yet concerned, it proves a sobering thought for many, though the sentiment is truly inspiring.

Ironically, Gathering of Developer's Jim Bloom's 'What is a Good Game Developer?' seminar is rescheduled, as Bloom is running late. In an industry plagued by late product, this turn-up seems remarkably apt. Cue much giggling about how the presentation has slipped. It'll be ready soon, quips one, but when it is finished it will be just the presentation Bloom wanted to write when he started.

But at least everyone can attend the lecture by Paul Holman of Sony Computer Entertainment, entitled 'PlayStation Development 2000'. In truth, this title is slightly misleading. Holman begins by revealing Sony's internal figures extrapolated from PlayStation registration cards. It's an impressive graph. Holman then breaks down the demographics. He suggests that the PlayStation's diverse audience offers gaming possibilities that wouldn't be viable on any other system. Girls, for example, are proving to be a fast-growing market. Still a statistical niche, certainly, but a niche within the size of PlayStation's audience is not insignificant. He suggests that developers should never compromise on ideas in order to ensure titles can be ported from one format to another. "Focus on one platform," Holman argues. "And that platform should be PlayStation."

Interestingly, Holman highlights how the diversity of PlayStation's audience means that developers must think differently. PlayStation owners are no longer hardcore gamers by any stretch of the imagination, and are therefore unwilling to persist with games they can't understand or prove too difficult. The common rule, he says, is to

make sure your game's first two levels can be played by anyone – something crucial in this age of product sampling: the most successful PS games have been titles that are accessible by all.

Say it with feeling

Revolution Software's Charles Cecil's lecture on 'The Big Story in the 128bit Revolution' stimulates much debate. At the unveiling of PlayStation 2 a few months previously, Sony appealed to the development community to 'create games with more emotion' and Cecil's speech is an extension of this.

Previous attempts to marry cinematic techniques with interactivity resulted in the aptly named 'interactive movie' abominations so beloved by developers with high-end rendering machines and little imagination.

ALL TALK

- James McClaren (below)
- Ben Sugden (middle)
- Nick Trout (bottom)
- Video System



How's it been for you?

James McClaren: It's been good. We've met some interesting people. The VIS lecture has been the most thought-provoking so far. It was very controversial and some of the ideas were a little idealistic, but it was good to hear.

Ben Sugden: There were too many analogies with the film industry. We're a much more complicated industry than that – and that's why we'll always be different. Maybe things will change, but I can't see it working the way he described. At the end of the day, technology is something that you have to take with you from game to game.

Nick Trout: But the studio model may catch on, purely because development needs to be kept to a manageable size. Once it becomes too large, you lose the spirit.

What do you hope to get out of the conference?

BS: I'm looking forward to the next lecture about coin-ops versus computer games as we're one of the few developers working on both. It will be interesting to hear what they have to say about the differences between the two platforms. People in Britain don't often make arcade games.

ALL TALK

■ Alex Darby
■ Designer, Codemasters



Ever been to this event before?

Yeah, I came to Develop! a couple of years ago, and last year I went to GDC in San Jose.

How's it been?

It's been all right. Generally, I've found most things to be a bit too low-level. I mean, I know I'm a designer and all that, but I've got a programming background and I've found that a lot of the presentations have skimmed over stuff that I think is important. I tend to get really annoyed at the way a lot of people don't seem to know what they're talking about.

Any highlights?

The best talk I've been to has been Chris van der Kuyl's. Whether or not it actually happens, it's nice that we've got someone that has that kind of vision. That's what we need – otherwise it's all going to get a bit fucked up and die. But his philosophy is eminently possible. There's so much in terms of middleware these days that there will come a time when the developer doesn't have to do a fat lot in terms of the underlying game code itself. There's game content to make, but the nuts-and-bolts stuff that potentially will get harder with more sophisticated hardware will not be much of a problem.

What kind of follow-up would you like to see?

I don't know. The thing about the computer game industry is that every company has its own agenda. Everybody worries about inside information being leaked out – but I don't think it's much of a problem. Nine times out of ten, if we at Codemasters found out what somebody was up to, we wouldn't necessarily change what we were working on to compensate. The industry is going to keep going until either EA buys everybody or someone like Chris van der Kuyl takes some initiative.

Preaching from the position of never having succumbed to the ease of this genre, and continually pushing the art of storytelling in his games, Cecil is one of the few qualified enough to speak with authority on this subject. He reasons that the way forward is to learn the principles of storytelling – the three-act structure you can apply to almost any movie is the most obvious example – and define a fresh "grammar of videogames."

It's an interesting point – though applicable mainly to a very specific style of game. Cecil argues that only by generating true emotion in interactive entertainment can the industry truly start

Meier could learn from an event such as this. But it is the twinkle in the eye of the newcomers to the industry that offers so much hope. You can tell people are genuinely excited by the discussion. Develop! provides a place to meet and swap ideas. And, best of all, Phil Harrison will be here tomorrow with Sony's PlayStation 2 demonstration.

With only one published game under his belt, the last person you'd expect to be able to lecture on 'Why Developers will Rule the World' is VIS Interactive's Chris van der Kuyl. But there's something about this affable Scottish CEO that warms the audience.

Music is often overlooked – and a system, in which musicians, games designers and publishers work together, would add much to the playing experience

to be taken seriously. He recalls Walt Disney's desire to elevate the standard of animation to such a level that the audience would be moved to tears (read more about this on p94). His goal is to do the same for videogames. It is a bold ambition.

Classic narratives are discussed and examples of how these principles could be incorporated into videogames given. The enthusiastic questions after the session demonstrate the inspirational topic. A rush of emotive games could well appear on forthcoming systems as a result of this lecture.

Investing in the future

As the majority of attendees slope off to a nearby pub for lunch, you can sense the effect the conference is having. Of course, the fathers of the gaming industry have long since risen above the purpose of Develop! There is little, one suspects, Peter Molyneux, Jez San or Sid

And his ideas are certainly radical.

Van der Kuyl argues that the only way the industry can survive is by investing in individuals, not companies. He can see a future where, say, a brilliant level designer is not tied to an individual developer, but instead contracts out, working for companies and projects he is keen to become involved with. After all, the producer of a Miramax movie is not tied to that company. Contracts will become the norm, and those being carried by others within their teams will be unmasked. It's a world that's harsher on the mediocre – but that's no bad thing.

He talks of the need for major developers to move towards a studio system in order to ensure they retain a healthy slice of talent. It's something he hints VIS is actively pursuing. Within a studio system, projects can be allocated to outfits with particular strengths, offering a larger scope for flexibility in content. Imagine if id had true affiliates: instead of the firstperson shooters it prefers, it would be able to work on other genres, though each with the priceless id hallmark. A number of developers thank their lucky stars this isn't the case, however – there would be less room for everyone else.

Larger than life

'Beyond Music', hosted by The Fat Man (a slim fellow, in fact) from Team Fat, proves the conference's unexpected gem. **Edge** missed the start of this session, nattering, as it was, over a cup of coffee with various representatives from DMA, so walking five minutes late into the packed room proves a little disorientating. The immaculately lined rows of chairs host row upon row of attentive developers, gazing in astonishment at the loud American preaching game music philosophy. He is brilliant; everyone is transfixed.

It transpires that The Fat Man is actually the composer of the *Wing Commander*

music, among others, and has very strong opinions on how the industry can more efficiently utilise its musical content. He suggests that the player never hears the majority of music composed for a game. This wastage is criminal – and he has a grand idea that can address this.

Imagine, he requests, a world in which composers submit music which is rated in terms of content. Some tracks might be combat music, others more subversive, written to evoke fear. This content is then held either online or on the hard disc or CD and, as a game is being played, the program selects new

Chris van der Kuyl (VIS Interactive) presents 'Why developers will Rule the World', a radical view of the future that advocates a studio system



tracks and accesses or downloads the relevant musical scores. If *Final Fantasy VII* used this kind of system, players could opt for different themes for every battle, rather than being subjected to the repetitive module Square provides.

It's ambitious, sure, but all revolutionary ideas are. Music is an often overlooked element of videogames, and this system, in which musicians, game designers and publishers work together, would add much to the playing experience at relatively little processing expense. As the session concludes, The Fat Man's diction increases, culminating to a backdrop of gospel music. He falls on the floor in mock worship, to rapturous applause.

The elation is quickly tempered, however, by an announcement by the conference organisers. Peter Molyneux, due to lecture after coffee, has been involved in a car crash. It's not serious, but the mood rapidly becomes more subdued.

For the final session of the day, **Edge** selects the rearranged 'What is a Good Game Developer?' lecture. Essentially an advert for the Gathering of Developers' way, it nonetheless addresses important issues like maintaining intellectual property rights. But after The Fat Man, even the most accomplished public speaker would struggle to hold the audience. The couple of instances **Edge** has to nudge a snoring Chris van der Kuyf is testament to this.

Hanging on the telephone

The revised agenda for day two initially appears a little disappointing. Martin Kenwright's session has been moved – mysteriously, he too was involved in a car crash a week or so previously, offering all kinds of 'X-Files' conspiracy theories – and Dave Perry's lecture has been cancelled. Still, the replacement seminars are at least topical – though **Edge** wonders how *Virtools*' Bertrand Duplat feels at being scheduled head-to-head against Phil Harrison. PlayStation 2 or 3D animation package? It doesn't take long to decide.

The attendance for 'Back to the Future: Developing for a Mainstream Internet Audience' proves how important the online market is perceived. Still no one's making any real money out of it yet, but popular opinion and the growing number of e-commerce acquisitions suggest that within the near future virtually everything will require an Internet bias. AOL's Stephen Reid's subscriber profiles are received with genuine astonishment; the average UK user owns a P166 with 32Mb RAM and no 3D hardware. Reid admits this snapshot isn't as accurate as it could be – the data is calculated from the master account holder (usually the one with the credit card) – but the rudimentary games currently played over the telephone line suggest that a large majority of AOL's subscribers simply can't run the multiplayer frag-fests those in the room would like to create.

AOL's most popular online game is Terris, one of the most basic MUDs you could find. Figures demonstrate home users' penchant for simple online games

The figures and statistics are simply staggering. AOL's most popular online game is *Terris*, one of the most basic MUDs you could imagine – yet it attracts eight times as many players as *Slingo*, a primitive combination of bingo and slot machines, and the ISP's second most popular game. Reid explains that the figures demonstrate home users' penchant for simple online games – those whose concept can be grasped easily. Of course, *C&C*, *Quake*, et al are all played in some capacity, but the figures don't even dent the mainstream audience. Keep it simple, he expounds, and they will play. It's not a popular philosophy – the development community would rather code wholly original multiplayer titles rather than continually rework traditional card games or marry disparate pursuits.

Plain talking

Speech recognition in games is nowhere near commonplace – but Gael de Kerdanet from Criterion Studios believes it will become an essential facet of videogaming. He argues that the reason it has failed to work or be taken seriously is because it is too



Some seminars, such as Art and Magic's Christian Dutilleux's (above) oration on 'Coin-op Vs Consumer Games' target a more specific audience

expensive in terms of processing power. But the advent of next-generation technology, taking PlayStation 2 as a starting point, will allow developers to achieve the minimum 97-per-cent accuracy the facility demands and integrate this into all relevant games.

While there can be no replacement for direct user control via joystick, keyboard or mouse, de Kerdanet asks the audience to imagine playing a team-based firstperson game where you can instruct NPCs to 'hide', 'wait here' or 'cover me'. The initial scepticism towards this input method is dissipated as attendees realise the scope and freedom that speech could offer.

There are some hardware and software considerations, it transpires. On top of the vocabulary and phonetic recognition, the code would have to compensate for background noise and music – though this can be overcome by subtracting the sound card's output from the received sonic algorithm. It's complex yet thought-provoking stuff.

De Kerdanet concludes by offering his vision of the future: we are teetering on a new technological age, he suggests, and because speech recognition is now technologically feasible, it will eventually happen. He sees proprietary speech recognition common in games

ALL TALK

■ Mark Knowles

■ Art director, Acclaim Studios



How's it been for you?

It's pitifully small. It's a chicken-and-egg scenario – the more that's offered, the more people will attend, and vice versa. I'm sure running it in conjunction with ECTS would be a better idea – the audience is already there, and if, across the corridor, away from all the hype, a relevant seminar was taking place, it would be easy to attend, without having to commit to a whole weekend of talks.

There's a lot of game development going on in Europe, and you'd hope that a European developer's conference would reflect the size, skill and history of the community, but with three stalls and two lecture halls we're not really doing ourselves justice. The Game Developer Conference in San Jose last Easter was massive, and there was heaps for everyone – artists, designers, programmers, musicians, producers, writers, the whole lot. **What's been the most interesting part?**

The seminars aren't focused enough to be of interest to those directly involved in product development. Industry trends and the coming revolution were the main topics, rather than specific game development issues which would appeal to the bulk of the development community. Companies both large and small are loath to share their secrets, but, nonetheless, the communication and sharing of ideas is only to be encouraged. Obviously, competition is healthy, and certainly drives us all, but equally important is the fact that most people in the industry love what they do, and would relish the chance to meet and discuss their specific disciplines, as well as how to push the boundaries of gaming to the limit.

ALL TALK

■ Gary Penn
■ Creative manager, DMA Design



What do you reckon, then?

It's the first time I've been. I was curious to see how things are developing along the European side of things – curious to see what I was going to get out of it, because I don't think it was that clear in the brochure. And it's always interesting to see what other people are up to.

Have you learnt anything?

Not especially. There did seem to be a distinct lack of focus. I'm not sure why that is – maybe it's because different developers have different needs. I've found it most interesting seeing how people I've known for a while handle the presentation side of things. In terms of content, probably 50 per cent of the stream material has been of interest.

It's something that's alien to European development – there doesn't seem to be the slickness or professionalism of the US conference, but, then, their things tend to be a bit more vacuous.

How important is a conference like this?

Essential. I'm curious to see how development is going to, er, develop. But it is essential that it works. We don't really have a strong European development community, and that's something that's missing. Any industry event that brings people together from different areas and different disciplines is a good thing, without a doubt. Seeing how other people are doing things is always interesting – but I'm not sure there's been enough debate as there should be. Possibly, that's typical British reservation. But it's not quite as in-your-face as I'd expect. But the conference is definitely a good thing. There's developer strength that needs to be built and there's publisher/developer bonding that needs to be formed.

by 2002, and by 2006 operating systems such as *Windows* will come packaged with integrated speech recognition technology. The days of digits may be numbered.

New horizons

If any session highlights the community spirit among developers, it's **Jez San's** 'New Opportunities for Developers' seminar. San may not choose to hug the headlines like his American counterparts, but in terms of popularity among his peers, there are few that come close. Visibly suffering from jet lag, and fronting a presentation that is as simple as they come – some *PowerPoint* snobs would sneer at the lack of moving slides or fancy graphics – San's natural charm and broad knowledge base epitomise the redundancy of style over content.

Obviously on the fast-track to next-generation technology, San's opinion on the new formats are highly valued. He asks developers not to get carried away by the paper specifications of the new consoles. The alleged one million

to the optimistic marketing numbers the coders were handed, resulting in a hefty and expensive rewrite.

San also points out an interesting technological anomaly: the next-generation machines are so powerful that they boast higher polygon throughputs than they can possibly process, necessitating a new method of geometry manipulation in order for their potentials to be realised. In simple terms, this means that the realistic figure of 15 million polygons per second for PlayStation 2 cannot be achieved with the machine's standard 32Mb of RAM – each vertex requires 64 bytes of memory, or 15Mb/s. Curve rendering reduces the memory requirements – but causes collision-detection problems. Developers need to fathom out new methods of graphic display by either scaling up from mathematical seeds (a planet Argonaut has prototyped can be displayed from a fractal seed rather than being mapped out entirely in advance) or scaling down the resolution in certain circumstances. It is evident that the number crunching



The Fat Man makes like a Yank TV evangelist as he delivers his impassioned, music-centric plea

Like a driving instructor, Phil Harrison outlines how the new machine works before handing over the keys. The mechanics matter no longer – it's where you take it that counts

polygons per second the original PlayStation could handle was, he agrees, technically possible. But start putting in gameplay routines and special effects and that figure drops to a realistic 100,000 – a "bullshit factor" of ten to one. He now takes paper specs with a pinch of salt, recounting a tale in which one hardware manufacturer asked Argonaut to develop according to the specifications it supplied; when the hardware was delivered, the 3D engine it had prototyped proved sluggish thanks

needed for next-generation development would baffle all but the most committed (and possibly insane) mathematician.

Other areas San addresses include the pros and cons of licensing ready-made engines in order to speed up the development process – a system Valve used brilliantly for *Half-Life* – and addressing the whole middleware concept. The session culminates in some R&D demonstrations of current Argonaut developments. The N64 physics models incorporated into a 3D cartoon racing game, and the 3D realtime lighting system the company is developing, leave the audience breathless.

The next evolution

During coffee, two things are noticeable. For the first time preceding any presentation, a queue has formed outside the auditorium in which **Phil Harrison** is scheduled to lecture. Second, a simple note on the opposite conference room's door reads simply:

'Virtools' demonstration has been cancelled'. A few wonder whether they'll spot Bertrand Duplat among the faces in the 'Console Futures' seminar.

The audience is not disappointed. Expertly expounding Sony Computer Entertainment's videogaming philosophy, Harrison spends a good quarter of an hour building up to what he dubs, "The next evolution of videogames." Like a headmaster lecturing a senior school, he asks developers to liaise with their Sony account handlers for information regarding development kits. He outlines possible uses for PlayStation 2's processing power. It's a THX

Criterion Studios' Dreamcast booth is one of just three exhibits at Develop '99. With ECTS around the corner, most attendees came along just to listen



presentation: the audience most certainly is listening.

Harrison delivers his message with such conviction that just about every attendee can do nothing but sit in silence as if attending a sermon. When he says PlayStation 2 is capable of something, these guys believe it. He

even addresses San's "bullshit factor" expertly, playing down the hard facts and concentrating on the greater scope the machine offers in terms of radical game design. Like a driving instructor, he outlines how the new machine works before handing over the keys. The mechanics no longer matter – it's where you take it that counts.

The lights are then dimmed and the next-generation PlayStation technical demonstration video is shown – the first time it has been aired publicly in Europe. The majority of attendees have not seen it before, and it's not long before they are romanced by its glamour. To them, it becomes immediately clear that Sony's next machine is something special.

Your questions answered

Lasting close to an hour, Harrison's lecture is absorbing, yet never boring. There is only time for a few questions. Will PlayStation 2 be PocketStation compatible? Yes. Will the machine play DVD movies? Harrison is non-committal. Will all games have to come on DVD? No, publishers can choose between CD and DVD. When will it launch? When the software is ready – not before.

How many joypads will the machine cater for? Harrison refuses to answer, suggesting that to detail that specifically would give away too much about the new machine. This implies, however, that PlayStation 2 will cater for as many players as each game permits, with joypads linking not directly into the hardware but daisy-chaining off each other. The possibilities are endless.

Will it feature a modem as standard? No, although it will be available as an add-on, purely because Sony expects telecommunications to advance so rapidly that within a year the internal modem could prove to be inadequate. When a mobile phone punctuates the silence, one suspects it is Sega ringing to prove the validity of an onboard modem.

Harrison leaves the stage to much applause – and to increased respect. That neither Nintendo nor Sega bothered to directly address the European development community could prove a massive own goal. As the attendees shuffle off home, there's little doubt which format they believe will succeed.

While Develop!s US counterpart, GDC (Game Developer's Conference), may be a much larger affair, the signs for Europe's development community are encouraging. This year will be remembered as a turning-point for the conference, thanks, largely, to



Pyro Studios representatives listen as an individual shares ideas with the assembly during its '2D or Not 2D?' seminar. This is Develop!s strength

even more vital because of shifts in development brought about by PlayStation 2 and Project Dolphin. For the first time since we started producing computer games it will no longer be possible for a single team to build expertise on a platform and produce a title without reference to the outside world. When you got a Spectrum you could buy a copy of the ROM disk assembly and code away. Eventually, you could create your own library of routines and end up producing a game without talking to anyone else at all – except, maybe, a publisher, and you didn't really need to talk to them in the early days. Subsequently, we've had to go through the process of licensing proprietary development kits from console publishers, but even then a developer could develop for that platform without reference to the outside world, apart from the publisher.

"Now, with the advent of the complex middleware system for new consoles and the arrival of machines that are hugely complex, it is no longer possible for developers to make their mark on the entertainment world without sharing information and buying in technologies and skills from other markets. Therefore, any channel of information – be it a newsletter or a

ALL TALK

- Dan Marchant
- Director, Obscure Productions



Ever been to Develop! before?

Yes, I've been to all of them, starting right back when they used to run parallel with ECTS. They get better and better. One of the key things, like all shows, is about meeting people. We've got academics here for the first time, offering courses in subjects like art for videogames – it's improving all the time.

What did you think of the seminars?

On the whole they've been very varied. Some of them could have been a bit more to the point – the EEC one waffled a little bit – but that's what you'd expect from them. They're a European body and sometimes I think they get paid by the word.

One of the interesting things that they had at one of the other Develop!s was a panel where a number of people discussed topics from the floor – tricks for development, that kind of thing. The whole thing was Q&A based and it proved very useful. Some of the presentations here have avoided the nitty-gritty.

As it grows you'll get more diversity, which I think will be much more useful to the industry.

"If this event ceased to happen, we would be in very real danger of losing out in the information war"

Steve Cooke, Develop!

the presence of Harrison.

Steve Cooke, the event's programme consultant, is adamant that the conference shall succeed – purely for the sake of our indigenous talent. "Develop! exists to ensure we retain parity with the development communities in America and Japan, both of whom have very well established methods of sharing information among each other and are therefore stronger as a result," he offers. "If this event ceased to happen, we would be in very real danger of losing out in the information war.

"The future of this conference is

conference – is essential to the survival of your company if you're a developer."

Develop! is clearly important for the interactive entertainment industry. By bringing together so many developers, the videogames you play will continue to improve. As the subjects discussed at Develop! prove, the new technologies throw up a host of new opportunities and present their own inherent problems. So long as inspirational speakers spread their visions, British development can only improve. Sharing, after all, has at least as much value as individual innovation.







Bits and Pieces

Its production values are shaky, its review slots are too long, and it's aired past midnight, but Channel 4's show 'Bits' is something of a victory for videogames on television. Edge takes a look behind the scenes

Word has got around Future Publishing's offices that **Edge** is going to interview the three girls who present 'Bits'. "They can't know what they're on about," offers a hack from another mag. "They're just mouthpieces."

Another is only slightly more open-minded: "Give them a little quiz. Ask them who designed Mario." You can't help feeling this is a bit rich, given that it's coming from the same people who constantly bemoan the stereotyping of gamers as geeky, antisocial teenage boys. For a moment, it's as if **Edge** has wandered back into the 1970s and on to the set of 'Carry On

Gaming', where Hattie Jacques and Joan Sims have had the nerve to set up a rival, women-only videogame magazine: Bernard Breslaw: 'Blimey, Sid. Birds reviewing games!' Sid James: 'I'm not standing for it, Bernie. Everybody out!'

If you didn't already know, 'Bits' is Channel 4's late-night show devoted to videogames, fronted by, as Channel 4's own spin has it, 'three gaming babes'. The babes in question are **Aleks Krotoski**, **Claudia Trimde** and **Emily Newton Dunn**, and **Edge** isn't surprised to find that they're enthusiastic and knowledgeable gamers to boot. It's just a question of maths, really.



Location work: glamorous



'Bits' featured *Trickstyle* before some mags even printed screenshots. A result

Late-night TV has tiny budgets – 'Bits' has only around £8,000 per episode. No show on such a meagre budget can afford the luxury of presenters who simply turn up and read lines. They have to write their own scripts, do their own research and, in this case, play the games.

The schedule on the weekly show is as tight as the budget. "Friday, we have a meeting and get all the games together so we can have hardcore playing over the weekend," explains Krotoski. "Monday, we come in with a general idea of what we're going to do and continue to play until

later that evening, after which we write up the reviews. By Tuesday morning we've got the big script written up for Aldo [Palumbo, the show's director and producer]."

Rewrites to script continue until a final version is ready by Wednesday morning. "We spend all day Wednesday playing games, doing research for next week," continues Krotoski. "Then Claudia and I do all our pieces on Thursday. Friday, Emily does all her pieces, then we do all three of us together." Editing takes place on Saturday, with the show delivered to Channel 4 just over a week before transmission. For the 12 weeks of the 'Bits' run, it's at least a six-day-a-

week job for most of the eight-strong team of presenters and crew. "It's heavy duty. We put in a lot of hours," Krotoski adds.

New York, New York

The idea for the programme originated with Channel 4's commissioning editor for night time, Stevan Keane. On a visit to New York last year he was impressed by videogame shows running on cable TV there, and felt something similar could work in the '4Later' slot. To produce the show, he approached Glasgow-based Ideal World Productions, which had already created the 'Vidz' show for the same spot, as well as other Channel 4

"I'm the more light-hearted gamer. That's very important to have, so that people don't get scared off because they don't understand what you're saying" *Claudia Trimde*



"So, thanks to Peter, whose favourite garden shrub is the azalea"



How to scare a TV presenter



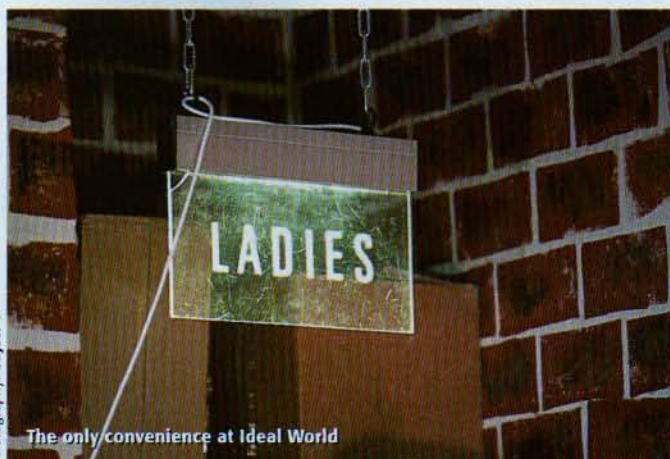
"Next week – Ainsley Harriot"

series, including 'Deals On Wheels', 'Driven' and 'Coltrane's Planes and Automobiles'.

In December last year, Palumbo was presented with a huge list of possible presenters: "We did screentest after screentest. The main thing was to get the right presenters, that took the time." So was the concept of the show always to be female-fronted? Krotoski: "Oh, yeah. Definitely. It was initially going to be two, but they went for all three of us." Trimde: "They originally tested Emily and a guy, but then they decided they didn't want this guy-girl relationship."

"We wanted presenters with varied levels of knowledge," says Palumbo, the theory being that by having a breadth of different experience, both hardcore gamers and casual viewers can find a 'way in' to the programme. "I'm the more light-hearted gamer," explains Trimde. "That's very important to have, so that people don't get scared off because they don't understand what you're saying."

At this stage of development, the proposed format of the show still owed much to the New York cable access programmes that inspired it. Krotoski explains: "What we were going to do, to keep production costs low, was to shoot us in front of



The only convenience at Ideal World

Photography: Object 4

The private 'Bits'



Claudia Trimde

Where are you from?

I'm originally East German, so I've lived a repressed life. We tried to escape; we made three different attempts. My Mum made it to Czechoslovakia, then the wall came down and we thought, we're not going to see her, then suddenly we had reunification, so I went to Hamburg for about four years. My Mum's a doctor, my father's a Schnapps maker. I learned Russian at school, so when I came to the west I needed to learn English. I applied for scholarship and I got one to come to Scotland, did my Highers and decided not to go back because I love Scotland that much. I got into Glasgow University, doing Film, TV and Theatre and that's where I met Aleks. Then we lost touch for years and years, and now we're back together again.

What did you do before this?

I have literally just finished my degree (a Masters in Business Management). I'm graduating next week. I was doing

my finals at the same time we were doing the first programme. I got a 2:1, but I'm appealing as they got one of the grades wrong. At the same time, I run a graphic design company, basically for model agencies around Scotland, and I do modelling.

What was your first videogame?

It was an East German game, their first arcade game. It was called *Schiffen*, which means 'skiing'. All you had was a monitor with points that were the skis, and the piste was just marked by white lines. It was the most basic game, a black screen with two points and two lines, and I loved it. My Aunt owned a pub - well, she supervised it, as you couldn't own a pub in East Germany - and she just put the plug in so I didn't have to put any money in.

Favourite games?

I would say I'm a *Crash Bandi*-girl. I just like the cuteness of the game. I like dancing around and doing the little missions. I like fun games. I don't

have any patience, I want to be able to accomplish something in, maximum, an hour and a half, otherwise it bores me.

What's the worst thing about videogames?

What I don't like is all the violence. [Newton-Dunn: "She's German."] It bores me to death, it really does. [Krotoski: "But there's nothing like the feeling of getting through corridors after you've blown five million people away. You don't necessarily want intelligent enemies who'll cover each other. When it comes down to it, if you're in the mood, you just want to kill and you just want to blast."] Aleks, you worry me sometimes.

What's the best thing about videogames?

I think it's where it's going - the future. I can see myself, instead of playing consoles, just becoming the hero in virtual reality. That's what I want to do. Like in *'The Matrix'*.

chromakey. But it turned out that didn't work." Another rejected idea was to film the girls over the shoulder as they played, but this also proved too dull. The format Ideal World finally arrived at is, as Krotoski accepts, "Like something you might see in print, with news, previews and reviews. But the best thing about it is that you see moving images."

The cheap look of the show is down to time and budgetary constraints, as Palumbo concedes: "We can't be over-ambitious, but we try to be witty. As soon as you get into a game you think, wouldn't it be great if we could... But that would take a day, and we've only got two days to do the whole shoot." The cluttered office set - in a modestly

sized room down the corridor from Ideal World's own office - was another late addition to the show, concocted after they dumped the chromakey idea. "I have to say," admits Trimde, "I would have rather had a more modern setting as we're talking about really bang-up-to-date technology. But I know what they're trying to achieve, they're trying to make it a little contradictory." "I just don't like the bricks with the purple 'B' in it," says Krotoski. It's hard not to agree.

Reaction to 'Bits' has been very positive to date. The first show rose to a 17 per cent audience share - not bad when you consider that Channel 4's average share is around 10 per cent. That 17 per cent

"We can't be over-ambitious, but we try to be witty. As soon as you get into a game you think, wouldn't it be great if we could... But we've only got two days to do the whole shoot" Aldo Palumbo, director



"Let's see... Okay, in the style of Meg Ryan in *'When Harry Met Sally'...*"



"How's this?"



High comedy in its rawest state. Hmm



The special effects budget is rather slim

"I think there'll be more and more women who want to program and do stuff like that. It's just a matter of time – our generation is halfway there. Perhaps we'll even get some male pin-ups" Emily Newton Dunn

approximates to upwards of 500,000 viewers – a higher figure than the circulation of the biggest-selling print magazine, and all the more impressive given that the show goes out after midnight. The videogame industry is warming to the show, too. "It's getting easier," says Palumbo. "It was hard at first, but we're trying to win these people over." "They're now starting to trust us," offers Krotoski, "and they're starting to give us exclusives because they know people are watching us."

"All the designers and programmers and developers we've spoken with are very pleased that we slag games off," she continues. "We couldn't do it any other way. People come away with the feeling that we do know



"And this is for Dominik Diamond"



The latest technology is wheeled out for the tips bits

a lot about games, that we are passionate about it and that it is our industry and we just happen to be the faces." Trimde adds: "A lot of people say, 'It's so much better than 'GamesMaster' – that was horrid!"

A man's game?

Given the scepticism – even sexism – that **Edge's** visit to the 'Bits' set aroused, one subject has to be broached. Just how does it feel to be a woman in an industry where the most visible female is Lara Croft? "It really fucks me off, actually," is Newton Dunn's response.

"Emily has a personal vendetta against Lara," explains Krotoski. "I hate her," expands Newton-Dunn. "All those fucking ads with, 'Do you really want me to wear this?', where the girl is in the Lara costume and the bloke's in the bed, practically with a stiffy."

"It's just divisive," adds Krotoski. "Sorry, girls. You're not allowed in this world."

Newton Dunn: "Yeah, you're just allowed to dress up in flimsy little costumes and get your tits out."

"Over time, I've learned to turn a blind eye to it," says Krotoski. "That's the way it's going to be. It's going to be in *Loaded* and *Maxim* and *FHM*,

and there's very little that we can do about it. Lara Croft is a pin-up. She's a blow-up doll. There's not a lot of detail there apart from the basics. You can fill in the blanks however you want. I actually prefer *Lula Virtual Babe* because at least she's straightforward. There's no bullshit there, it's like, 'This is a one-handed game'. It's fucking hilarious, I laughed and laughed. Whereas *Lara Croft* is taking itself far too seriously."

"There's actually quite a lot of women in the industry," offers



The most essential items of kit in the office: bar joypads

The private 'Bits'



filesKrotoski

Where are you from?

I'm from all over the US. I've lived on all four coasts, even the North one, against Lake Eerie. My family is mental, my Mum lives in France, my Dad lives in Louisiana, but they're Polish. I'm a big mish-mash, a mutt.

What did you do before this?

I was at the BBC. I'd been working in the BBC for about a year and a half doing various things, presenting 'Network Choice' in a programme called 'The Beat Room', and doing a heck of a lot of radio for BBC Scotland. And, of course, tons of researching for various TV and radio programmes.

First videogame?

Pac-Man. I remember it distinctly because I was too short to see the screen and I didn't quite understand what was going on. And I became an

addict of *Frogger*. *Frogger* became the basis of my future. My future falling apart [laughs].

Favourite games?

We got a Game Boy Color and I'm right back into *Super Mario Land*. It's always been one of my favourite games, it's just a laugh. Favourite games now? It's really quite tough. I'm still an old-school girlie and I like my old-school games. Picked up another copy of *Paperboy*, oh, it's so good. But modern games, I'd have to say *PaRappa*. And I've not been able to put *Um Jamma* down.

What's the worst thing about videogames?

The way games are going now, especially PC games, they're selling them on this engine or that engine. *Nocturne* has an advanced cloth simulator engine, and I'm thinking, but

what about the baddies? *Doom* didn't look that great but, hey, you could slaughter thousands of beasts. Nowadays, they're really trying to boost the immersive experience, it looks great, but the processing power's being eaten up by that, and the gameplay itself is not up to scratch. **What's the best thing about videogames?** Distraction – but using your brain instead of just staring at a wall. The fact that you can take yourself out of yourself for a bit in a way that you can't do with a book or a film. And you're learning every time you play a videogame – in good games, at least. Actually, the best thing about videogames is good games. The worst thing is bad games, and we're getting a lot more of them recently.

The private 'Bits'



Emily Newton Dunn

Where are you from?

I'm a born and bred Londoner, and don't have any exciting stories about that. I lived in Paris and Dublin for about a year in each. My dad lives in France, my mum lives in London and that's it.

What did you do before this?

I worked in PR, and still dabble in it. Youth marketing – beauty, consumer, games, a bit of everything really. And I write stuff. I started off doing game reviews and the occasional feature for a magazine called *Club On*, then I wrote a big feature on girls and gaming for *Touch* – I do their games reviews now. And I write for the

PlayStation Website and lots of other Websites, too.

First videogame?

Space Invaders, the classic. I used to have a little handheld version, as well, which was pretty fucking cool. I wish I still had it now, as no doubt it would be worth a fortune – it was really cool in blue, real '70s kind of stylee.

Favourite game?

Mario Kart for the Super Nintendo. It's a fucking classic. And *Tetris* on Game Boy, without a doubt. And *Tekken*. I love the *Tekken* series, as well. I like instant gratification-type games.

What's the worst thing about videogames?

Repetition. How many sequels? Yeah, okay, sometimes the graphics look better and there are more characters, but it's really nice to get a fresh, original game, although it doesn't happen that much anymore. We're on to *Tomb Raider 4*. Four, for fuck's sake.

What's the best thing about videogames?

It's getting more sociable. Dreamcast has got four controllers now, N64's got four controllers. It's not regarded as a dweeby thing to do these days, you're not necessarily a geek if you play games. More multiplayer games, please. And bigger tellies, so we can have split screens more easily.

Newton Dunn. "I think there'll be more and more women who want to program and do stuff like that. It's just a matter of time – our generation is halfway there. And the way women are represented will hopefully change. Perhaps we'll even get some male pin-ups."

Trimde's verdict on the whole Lara question is a little different to the others, a little more, well, European: "I really don't care."

Back in a bit?

Gossip in the 'Bits' office that morning has been straight out of 'Alan Partridge' with, 'Are we going to get a second series?' There's no firm

news from Channel 4 yet, although Palumbo reports they are "delighted" with the show. The main interview and photoshoot over, Newton Dunn heads to Glasgow airport – she commutes from London each week for the shoot – while **Edge** heads off for lunch with Krotoski and Trimde. Trimde hopes that, if C4 recommissions the show, they'll start again in September so they can cover all the releases up to Christmas. Krotoski hopes they'll start again in September so she doesn't have to look for another job. How do they see the show developing?

"I can see us bringing more news in, as that's an advantage we



"Videogames, they're my life [yawn]"

"One thing I really want to do is retrogaming. And a serious look at Internet gaming, and independent developers – people who program their own stuff, one-man game industries" Aleks Krotoski



These TV types are just bonkers

have over magazines, and also a lot of people don't have access to the Internet," says Trimde. "And I think we should concentrate even more on the gameplay. We've had a lot of FMV in there because it just looks gorgeous, and game companies don't always like to send you the gameplay on video. It adds quality to the programme, but in the end, the gamers are going to be disappointed." "One thing I really want to do is retrogaming," enthuses Krotoski. "And a serious look at Internet gaming, and independent developers – people who program their own stuff, one-man game industries."

Of course, it's ventured, they realise that TV presenters like Denise van Outen and Gail Porter have now replaced supermodels as the pin-ups of choice. What about the prospect of a men's mag getting on the phone and asking for a rather less compromising photoshoot than today's for **Edge**? "No way. Absolutely not," states Krotoski. "I wouldn't mind," says Trimde. "I'd do nude modelling."

Interested picture editors should note that Ideal World Productions' number can be found in the Glasgow phone directory. The first series of 'Bits' ends this month.



TESTSCREEN

The definitive monthly assessment of the world's latest videogames

The beauty of beige

With the ominous shadow of PlayStation 2 lurking on the horizon, Sega hasn't stood around languishing. In Japan, the recent Dreamcast price cut has seen weekly PlayStation sales eclipsed by another platform for the first time in countless months. Sega's home market appears to be finally waking up.

Which is also what a substantial number of western developers did after witnessing Sega's impressive E3 showing in May. Talk of the next-generation PlayStation may have dominated the air time of those flying across to LA, but on the return journey just as many were talking about Dreamcast. Most importantly, hundreds were talking about developing for it.

And this is where Sega's latest console could catch Sony by surprise. Unlike the next-generation PlayStation, Sega's machine is a PC in plug-and-play disguise. It has all of the advantages of a beige tower (Internet access, modem, keyboard) but none of the defects (installation procedures, inevitable crashes and incompatibility problems). Its architecture means that developers can port across PC projects in a short space of time. The benefits are significant: development costs remain appealingly low for what essentially classifies as another format, and any publisher wishing to recoup the inevitable difficulties associated with releasing a game for the PC – a format

so plagued by piracy, continuous hardware upgrades and lack of recognisable or established brand value that even outstanding titles fail to reach the level of sales generated by a fair PlayStation release – could initially view Dreamcast as a way of generating more income from the same product. It's killing two bandicoots with one rocket-launcher strike, if you like.

There is another critical aspect to the PC angle, though. **Edge** has long been in contact with countless gamers who, though keen to experience PC titles, are simply not prepared to spend £1,500 for the privilege of spending hours trying to get the bastard things to work. With the increasing number of PC developments being announced for Dreamcast, these same individuals will immediately be able to play the games with a reasonably modest £200 investment.

This could be key. For as long as Dreamcast keeps alongside ever-evolving PC technology, developers will be keen to port their products across to Sega's platform without encountering barriers.

The strength of Sega's own software properties and its machine's online capabilities are selling points in themselves, but the potential afforded by the existence of the massive PC development community could yet become one of the company's biggest weapons against the Sony juggernaut.



Rage has proved the simplicity of PC-to-DC ports with titles like *Expendable* (left). Stronger examples are on the horizon in the form of *Alone in the Dark 4* (centre) and *Rogue Spear* (right)

Every issue, **Edge** evaluates the best, most interesting, hyped, innovative or promising games on a scale of ten, where five naturally represents the middle value. A game receiving a 'seven out of ten', for example, is a very competent title with noticeable flaws but which should still appeal to a considerable range of players. It does, after all, score two points above average and should therefore not be considered as such.

Edge's rating system is fair, progressive and balanced. An average game deserves an average mark – not, as many believe, seven out of ten.

Videogames on the Edge

This month's red-eye inducers



Silent Scope (Coin-op) Konami

As **Edge** recently found out, waiting at Heathrow's Terminal 3 is no longer a chore thanks to the presence of this startlingly atmospheric shooting sim.



Ferrari F355 Challenge (Coin-op) Sega

With access to the cabinet on freeplay recently, it was difficult to resist the charms of Yu Suzuki's most ambitious work. A supremely convincing title.



Metal Gear Solid (PS) Konami

Integral's arrival forced another play through Konami's thirdperson stealth masterpiece. And it still makes *Syphon Filter* look rather third rate.



Bionic Commandos (Coin-op) Capcom

Strider 2 (see p125) inspired a bout of other 'what ifs' around the office. This platformer would be another welcome resurrection.

Index

Dino Crisis

page 76



G-Police 2

page 78



Kingpin

page 80



Total Annihilation: Kingdoms

page 82

Driver

page 84

Metal Gear Solid: Integral

page 85



Buggy Heat

page 86



Shutokou Battle

page 87

Quake II

page 88

DINO CRISIS

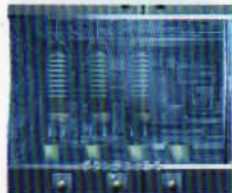
TESTSCREEN



While the characters' dialogue is in English, the Japanese text can often make puzzles frustratingly difficult



Instead of simply blasting at the dinosaurs, scripted plot elements provide opportunities to kill them in more novel ways. Tempting this dino into a gas chamber (above right) is one of the easier ways to dispose of it



Mental dexterity is as important as speed with the joypad in this game, as plenty of codes and puzzles must be solved in order to progress through to Dr Kirk's laboratory

The contrasts aren't as radical as those between their cinematic inspirations – cult classic 'Night of the Living Dead' and digital blockbuster 'Jurassic Park' – but *Dino Crisis* is a very different beast from its zombie-populated predecessors. Given the task of expanding the series he originated, producer Shinji Mikami has crafted a more thoughtful experience this time. Where *Resident Evil* was a heady mix of phantasmagorical gore, *Dino Crisis* is tactical tension rather than survival horror.

The main reason for this is the pace of the action. *Res Evil* was, essentially, a thrill-kill game; its philosophy: if it moves, shoot it. And there was always enough firepower to deal with any creatures encountered. *Dino Crisis* contains far fewer enemies and consequently they are much

harder to kill. Whereas a single blast of a shotgun could behead a zombie, the one-shot dinosaur kill is rare. Instead, Mikami-san has cleverly added sleeping darts to the armoury. These tranquilise most beasts for a short period of time, opening up strategic gameplay elements. For example, if a dinosaur is in a main corridor, it's worth killing it as that location will need to be revisited. Otherwise, it's better to stun it, explore the area and then exit quickly.

More lateral thinking is encouraged by the forcefields dotted around the map. Using these, dextrous players will be able to run past dinosaurs, switching them on when safely on the other side of the beams. With practice it is even possible to lure dinosaurs, leaving them safely trapped in already explored areas. The

new 180-degree turn, triggered by the R2 button, is particularly useful for this. The old tactic of dashing past an enemy into a nearby room isn't enough now – dinosaurs have the ability to force doors. And they do break them down, crashing against portals before gaining access.

But if *Dino Crisis'* creatures are improved, the plot is better, too. It revolves around a special ops team sent to capture a renegade scientist from an island laboratory. After insertion, it becomes clear that dinosaurs have overrun the island. With the scientist, Doctor Kirk, nowhere to be found, the team – consisting of gruff all-action leader Gall, systems hacker Rick and the single playable character Regina – splits up to explore. Many in-game cut-scenes maintain plot coherence,

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(Above) One of the keys to playing *Dino Crisis* is judicious use of beam forcefields to contain the dinosaurs



The animations are amazing, especially the tearing jaw action and the swinging tails. The dinosaurs can even knock weapons from your hands

Format: PlayStation
 Publisher: Capcom
 Developer: In-house
 Price: ¥5,800 (£30)
 Release: Out now (Japan)



alerting players to new situations as they arise. Interestingly, there's tension within the team, too. This comes to a head at various points when you are given the choice of following either Gail or Rick. Although these parallel strands quickly rejoin the main narrative, Mikami-san presumably wanted to highlight the replayability of what is otherwise a relatively short one-disc game. There are multiple endings and bonus-only endgames to complete as well.

Other gameplay elements revolve around the traditional *Res Evil* pursuits of exploration and puzzle solving. The latter, in particular, looks certain to tax younger fans, as well as increasing the sales of the game's strategy guide. Not only do you have to collect two disks to open each major door, but once the keypad is activated, various letter and number codes need to be broken. Other key points in the game are won by a variety of memory tests



'Interdoor' loading screens feature an animation of Regina

Unlike previous games, it's clear that **the dinosaurs are the stars of the show**. The most prominent character is the fearsome T-Rex, which **raises the difficulty and adrenaline levels** substantially

and 3D geometric puzzles. Bizarrely, *Shenmue*-style 'QuickTime' events also make an appearance. At different stages of the game, a cut-sequence is triggered and danger flashes at the bottom of the screen. The player must then frantically bash the icon buttons to avoid certain death.

However, unlike previous games, it's clear that the dinosaurs, not the humans, are the stars of the show. The most prominent character is the fearsome T-Rex. Taking the role of Mr X from *Resident Evil 2*, this monster reappears regularly throughout the game, raising the difficulty and adrenaline levels substantially.

The smaller dinosaurs move effortlessly, even if their basic speed

is somewhat slower than expected. But the animations are truly fantastic. Some species jump claws first, while others simply lumber straight at you. They can even use their tails to knock weapons out of your hands, or drag you along the floor by the leg or arm. In fact, it's worth getting mauled a few times just to watch the biting moves, which are modelled on the jaw action of crocodiles. And while the T-Rex and others may not inspire the dread expected from the *Nemesis*, it and *Dino Crisis* are certain to keep the customers satisfied until the resurrection of *Resident Evil*.



Edge rating:

Eight out of ten



Capcom's item screen has been tidied up to make it simpler to equip Regina. Unsurprisingly, the grenade launcher proves a vital weapon

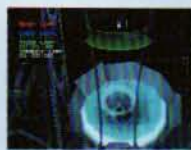
G-POLICE 2



While it's hard to convey just how *G-Police 2*'s draw distance limits the entire game experience, you can see for yourself that the explosions are well realised



With its poor draw distance, *G-Police 2* does not lend itself readily to eye-catching screenshots. There are some instances, however, where it almost looks the part



These shots are taken from a neat series of 16 bonus missions – it's a Rhino racetrack

Following its indifferent retail performance, many have come to regard *G-Police* (8/10, E51) as something of a *cause célèbre*.

Did its relative failure (critical acceptance notwithstanding) pertain, in any way, shape or form, to its alarmingly close draw distance? It's an interesting argument. You certainly

cannot deny that hardened gamers can on occasion be more forgiving of certain deficiencies than casual types. Having experienced the oft-abstract fodder of 8- and 16bit formats, the hardcore are perhaps more inclined to appreciate what a game attempts to achieve, grasping the implied message or suggested experience. Viewed in this context, it's not hard to see why *G-Police* beguiled its small, yet vocal advocates. Swooping between buildings, dogfighting amid skyscrapers; its brief was admittedly over-ambitious for both formats and, on the evidence of the PC version, the time, but it worked. For some, at least.

With *G-Police 2*, Psygnosis's Stroud studio has attempted to address the issue of pop-up, if not draw distance. Mindful of player complaints that buildings were prone to suddenly appearing, leading to skill-defying crashes, they have introduced wireframe outlines for all major city constructs. As you approach any given tower or roadway, the green defining outline is gradually fleshed, its textural, poly-based actual form peeling into view. True to its remit, this new feature does reduce the

number of sudden, unavoidable collisions. In almost every other sense, it's an embarrassing mistake.

There have been, and will be, far more ingenious ways of disguising the PlayStation's technical shortcomings. If anything, this wireframe-based extension of draw distance only truly succeeds in exacerbating a sense of unreality.

Perversely, *G-Police 2* appears to have a closer effective visual horizon than its predecessor. As its skyscrapers bleed into full-blown clarity, it's hard not to note that they do so at a distance of, as a conservative estimate, what would be around 200 yards. At full speed, such distance can be measured in seconds. To add insult to aesthetic injury, GP2's building and vehicle models are hardly inspiring. Furthermore, approaching any given texture turns it into a warping, writhing mess. Still, at least the explosions look good.



Dogfights show GP2 at its best, but are limited by the fact that craft disappear at roughly the same stage as buildings do. The *Elite*-style radar is constantly in use

KINSHIP



This is one of *G-Police 2*'s more involved missions: charged to defend a mobile airbase through dome-linking tunnels, the lights are suddenly extinguished



Format: PlayStation

Publisher: SCEE

Developer: Psygnosis

Price: £35

Release: September



G-Police 2's targeting system automatically locks on to any given craft. A 'toggle' option would have been preferable during dogfights, though

Two years ago, *G-Police*'s visual shortcomings were a blemish that slightly sullied the whole. And now? It just feels tired. As, indeed, does its gameplay. Joining new landscapes, armaments and mission objectives, the addition of new vehicle classes is welcome, though hardly surprising. Joining the (apparently antiquated) Havoc, are the Venom and Corsair, both possessing their own slight spin on the Havoc flight model.

As a further touch, two ground vehicles are also introduced during relevant missions. The Rhino is a tank, of sorts, endearingly armed not just with offensive armaments, but also with a handbrake. The Raptor, reminiscent of Robocop's ED-209, doubles *G-Police 2*'s complement of ground-based vehicles. Incidentally, while pondering why the middle and far distance remain equally dark while piloting the aforementioned two, it's enjoyable to weave between the many street lights that adorn each road.

And the missions? 'Reminiscent' is the word that first springs to mind. Fans of the original will recall the numerous instances where they were

called upon to 'scan' collections of cargo and craft, prior to a near-inevitable discovery and, subsequently, a grisly firefight. The wholesale re-usage of this device, among many others, underlines *G-Police 2*'s status as reiteration, not revision. It

Two years ago, *G-Police*'s visual shortcomings were a blemish that slightly sullied the whole. And now? It just feels tired. As, indeed, does its gameplay

would be hard (indeed, unfair) to accuse any given ingame task of being boring. With missions climaxing with a dogfight of some description, most levels are comfortably brainless, and completing them can be satisfying. It's sorry to note, though, that the game's 'events' – the first appearance of a large attack craft, for example, or the occasional option to order a wingman to begin an assault – are of little visual or play-based consequence. Their lack of ambition is underwhelming, to say the least.

G-Police 2 is the right idea, but on the wrong format. Darting between

buildings in a fully featured, but above all, visible, city could be an exhilarating experience. Alas, the PlayStation – for all its relative, and many remaining, strengths – is ill-equipped to provide such a spectacle. Worse, *GP2*'s catharsis of intriguing new ideas makes it a distinctly average and familiar tale of old gameplay revisited. Bereft of the visual aplomb usually harnessed to conceal such mediocrity, *G-Police 2* is anything but an arresting experience.



Edge rating:

Five out of ten



Complementing the bonus missions as rewards for dedicated players, Psygnosis has included 'secret' artwork and music, opened via the main campaign mode

KINGPIN



Level design is generally good, with episodes taking in docklands and 'Blade Runner'-esque cityscapes. Each of the characters' skin is extraordinarily detailed, too, particularly when riddled with bullet holes after a confrontation



Kingpin features the best ever rendition of a flame thrower. Searing flames lick across the screen turning enemies into human torches

In an overpopulated genre dedicated to the depiction of casual violence, it's something of an achievement to be recognised as the most brutal 3D shooter of them all. But *Kingpin's* seamy graphic realism brooks no argument – it's difficult to visualise a game further removed from the naivete of zapping space invaders or karting with moustachioed Italian plumbers.

Though *Kingpin* utilises the same (albeit heavily modified) technology as *Quake II* and *Half-Life*, it's the power of that engine to create a convincing, contemporary environment that undoubtedly makes this a watershed game. Unlike previous *Daily Mail* page-fillers *Grand Theft Auto* and *Carmageddon*, some of *Kingpin's* more visceral content will disturb even seasoned gamers. Deleting a human corpse's extraneous features one by one with a shotgun, until nothing but a mutilated torso is left,

draws gamers into ambiguous ethical territory previously unexplored by opponents with tentacles or faces like a fractal jigsaw.

But as much as *Kingpin's* amoral thrills will prove the bait to legislators and gamers alike, it also nurtures other qualities that prolong the excitement once the shock impact has dissipated. Happily, the gameplay is more than a procession of latent corpses bagged with production-line monotony. *Kingpin's* goons really do fulfil the old gaming cliché of running away when outgunned. And though the AI isn't as uncanny as *Half-Life's*, it does put up a decent fight, particularly as the difficulty levels are notched well-above average.

Ironically, all-out belligerence isn't the *Kingpin* way. Levels tend to escalate from cautious opening phases – where you're encouraged to explore and tap local characters for information – into bloody

denouements, when the scene is set and you've got no choice but to blast your way out.

The expletive-laden dialogue and shape-pulling characters are utterly in keeping with the seedy, underworld setting and make shooting your mouth off almost as entertaining as pulling the trigger. Interaction is well handled, with reactions dependent on your attitude (choose from the customary positive, negative and neutral states), and even accounting



Tragically, loading times between levels are almost intolerably bad

TOTAL ANNihilation: KINGDOMS



The range of only eight weapons – from lead piping to a tommy gun and bazooka – is disappointing

for detail such as whether or not your weapon is holstered.

Inevitably, each episode intersperses the action with a fair proportion of join-the-puzzles linearity, but the characters mask this reasonably well, theatrically pointing the player in the right direction. Some demand money for information or equipment (dollars can be looted from your victims), while others can be persuaded to join your gang.

But combat is where it's at in 3D shooters, and *Kingpin* heightens the intensity with extensive use of wingmen. Controls are kept to the usual faithful hound minimum of 'heel' and 'stay', but, unusually, up to three thugs may join your group, causing useful diversions – while they live. Should they somehow survive your stewardship, they can be healed, and it can be almost sorrowful to hear their oafish pleas for help.

Laudably, not every confrontation is a straight fight. Character interaction can reveal important combat cues. For example, in one set-piece, you'll be constantly hammered by security guards – until you discover that they're listening to a big sports game on the radio. Waiting around the corner, you can listen for the moment



The dying don't display *GoldenEye*-style death throes, tending instead to keel over gracelessly

The **expletive-laden dialogue** and shape-pulling characters are utterly in keeping with **the seedy, underworld setting** and make **shooting your mouth off** almost as entertaining as pulling the trigger

when the crowd roars with excitement, and then sprint past them as they crowd around the set.

Such moments elevate *Kingpin* above the mass of 3D scum that routinely clogs retail shelves. The only thing that's moderate about it is the multiplayer mode, which is unbalanced and uninspired. While *Half-Life* remains untouchable in terms of storyline, imagination and sheer scope, *Kingpin* is still worthy of exploration and has the edge in graphical realism.

Considering the grisly emphasis, it's a relief to find that Xatrix's game is more than the sum of its notorious hype. Its blend of meaty violence, dodgy capers and gritty atmosphere makes it as legitimate a game as any on the PC.

Oh, and as for the colourful language, you won't have heard anything like it since you were last down the pub.

Edge rating:

Eight out of ten

TOTAL ANNIHILATION: KINGDOMS



The perennial RTS pathfinding bug is practically eradicated in *Kingdoms*



The radar is a strange anachronism in a medieval-style fantasy game, but a necessary one when it comes to gameplay. It works automatically without recourse to more historically apt equivalents such as lookout towers



The number of units is vast, with over 130 individual types spread over four races. More can be downloaded from Cavedog's Website at www.cavedog.com

The revamping of established brands by making minor adjustments to their formula is common practice in the washing powder market, but a less welcome innovation in the field of PC games. Such is the case with the deeply disappointing *TA: Kingdoms* – a Tolkien-esque reprise of the two-year-old *Total Annihilation* (9/10, E52).

The original was one of the great realtime strategy games, which excited players with its then-unique polygonal approach and battlefield configurations. And while Cavedog has produced a

technically proficient game with few conspicuous flaws – overhauling virtually every element of *TA* to create *Kingdoms* along the way – its dogged adherence to a fixed perspective and isometric graphics means the *TA* series itself has been overtaken by the likes of *Warzone 2100* and the rest of 3D revolution. Without the technological edge, *Kingdoms* can't hope to match contemporary expectations as its predecessor did with sheer graphical muscle.

That said, the singleplayer campaign is more inventive in

Kingdoms, incorporating a hammed-up storyline and laudable mission-type variation, but it lacks inspiration. It's competently crafted, of course, looks attractive and benefits from one of the best interfaces in the genre, but there is nothing here that hasn't been done before. And better, too. *Red Alert* is better balanced, while the large-scale, rotatable 3D terrain of *Warzone* creates an immersive battlefield that makes *Kingdoms*'s flat plains and grassy knolls look twee.

Although not as twee as the AI, which has made a tentative if not very substantial advance since *TA*. Every mission is undermined by the witless efforts of the CPU, with its binary belligerence limited to Somme-style suicide rushes and futile gestures. In

It's **competently crafted** and benefits from one of the **best interfaces** in the genre, but there's **nothing here** that hasn't been **done before**



Each of the countless units is intricately detailed with characterful animations. Dragon necks flex when they breathe fire and galley blades cut through water

'Skirmish' and 'Campaign' modes the AI will continually expend troops by attacking the same position, regardless of success or losses. And every mission can be won by stockpiling troops and trusting to the usual weight of numbers plan. The problem could have been partly alleviated in the set missions if Cavedog had scripted in surprise attacks and unusual events. But, despite the use of multiple objectives, actual in-mission twists are rare.

Modern football and racing games can now justify their annual upgrades, which largely address technological issues rather than the gameplay itself because, at last, they can manage a passable simulation of their specialist subjects. However, singleplayer RTS currently feels more like a mechanical exercise than a meaningful conflict.



Isometric 3D still persists, but it seems restrictive after *Warzone*

And until its AI routines are improved, so it can at least imitate a worthy opponent, the value of RTS will be increasingly confined to the multiplayer arena. Which, of course, is where *Kingdoms* excels.

Deathmatch success is largely attributable to *Kingdoms*' ethnic diversity. Four races have been finely characterised, with each unit boasting individual graphics, animations, and, to a limited extent, abilities. Most of the units have direct equivalents in all four armies, but minor differences in design philosophy can have a major impact on playing style in a multiplayer battle. For example, the feral forces of Zhon are touted as a guerrilla outfit. Sure enough, their units are fast-moving but lack stamina. And, in action, against a similarly skilled opponent, they suffer badly in attritional combat, while thriving when the maps allow for hit-and-run warfare. The distinctions between the forces provide plenty of scope for tactical experimentation, although *Starcraft* remains the epitome of racial harmony on the PC; *Kingdoms*' armies lacking the web of interdependent relationships which underpinned Blizzard's delicate balance of power.

Ultimately, *Kingdoms* has pushed



Ambient sound effects are sadly underplayed. Units respond when activated but, unless battle is joined, *Kingdoms* can be eerily silent

old-school RTS to its limits. The graphical detail would shame the 3Dfx blandness of many accelerated games, and hardcore genre fans will welcome the innumerable tweaks and refinements to the interface – which remains among the most versatile. But rather than force the pace of level design innovation, Cavedog can be justly accused of resting on its laurels by settling for comfortable dotage in the fantasy niche.

The TA legacy ensures that *Kingdoms* is still well above average, but the experience of playing the sequel falls considerably short of that of sampling the original. **E**

Edge rating:

Seven out of ten

DRIVER

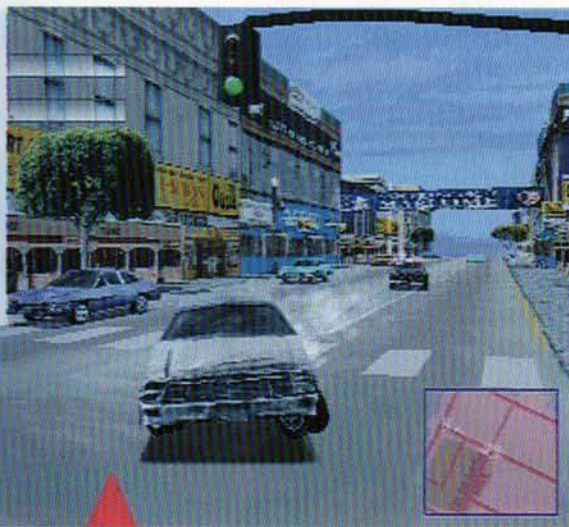
Format: PlayStation

Publisher: GT Interactive

Developer: Reflections

Price: £45

Release: Out now



The way *Driver* manages to capture all of the fundamental elements of the car chase is remarkable – just don't expect too much variety from the gameplay



The extra games (top), are a nice addition. The dynamics when cars are airborne are rather suspect (above)



The AI of pursuing police cars is not as convincing as that displayed by the vehicles you occasionally get to chase

With GT physically unable to provide *Edge* with a review copy of *Driver*, a trip to the shops to purchase the game was necessary in order to deliver this test.

The lord above only knows what GT was scared of, because *Driver* is a very accomplished title, if not the astounding experience it originally promised to be. It's unfortunate to discover that the opportunity to assume the role of a criminal, as promised when *Edge* first showcased *Driver* in E62, has vanished, leaving you impersonating an undercover cop. It makes little difference to the game, but it remains a sad indication of the threat of sanitisation that looms large over game developers' heads.

Beginning in Miami, successful completion of your missions sees you challenge the local traffic law enforcement in San Francisco, Los

Angeles and, finally, New York. The locales may differ but, regrettably, the essence of your tasks doesn't. It's usually a case of driving from A to B – to pick up criminals, drop off illegal goods or deliver stolen vehicles – while avoiding the police and chasing and ramming rivals, then heading from B to A – usually fleeing from the authorities as you attempt to reach a safe-house located on the other side of town. Such limitations are annoying when faced with such a rich premise.

Occasionally diversity does rear its head, such as the mission requiring you to take the role of a cab driver and scare an informant into submission through your reckless driving, but this is preciously rare. While the police cannot physically arrest you, as in *GTA* for example, they'll do a good job of transforming your car into a mashed-up wreck if you let them catch up with you. Endure too much damage and it's back to the main menu.

There is a lot of entertainment to be had with *Driver*. Executing a perfectly timed powerslide around a 90-degree bend, horn blasting, weaving in and out of the cities' rush-hour traffic, narrowly missing civilian vehicles only to witness the pursuing police car fail to do the same – it can

be an immensely gratifying experience. Similarly, seeing your American-made V8, complete with US-styled suspension, lean lazily into corners and bounce around San Francisco's street topography is a sight to be savoured. Authentic car dynamics are unquestionably *Driver's* forte.

Simply put, no other game offers you the possibility of so faithfully recreating the adrenaline-triggering car chases favoured by countless '70s movies – to the accompaniment of a funk-laden soundtrack.

To its credit, Reflections has included a number of additional modes to keep interest levels high. While these fail to match the appeal of the main game, their appearance at all, given the game's notoriously messy production schedule, is worthy of note. A two-player mode? Forget it.

It's not difficult to fathom *Driver's* performance at retail, where it has flown off the shelves. It presses all of the right buttons, marrying real-world and movie components to often thrilling effect. Bar its propensity to crash, and some repetitious gameplay, this is great stuff.

Edge rating:

Seven out of ten

METAL GEAR SOLID: INTEGRAL

TAJH Y3GUB



Don't buy *Integral* expecting more *Metal Gear Solid*-type missions. The disc is strictly for hardcore *Solid* fans

Metal Gear Solid: *Integral* could mark the beginning of a worrying new trend. After releasing a successful and popular game, developers the world over (or in Japan, at least) may only wait a few months before bringing out a remixed or souped-up version of the same game.

True, this has been seen many times in the arcades, particularly in the beat 'em up arena, and mainly courtesy of Capcom, but in the home there have been precious few such cases. Perhaps appropriately, Capcom issued a Director's Cut version of its seminal first *Resident Evil* game, but that was a singular occurrence. The arrival of *Integral* could now encourage others to follow.

So what do you get? Well, in



Integral ensures you'll master each of the game's firearms



Some of the levels require more strategic thought than others

addition to the full game (English speech with Japanese subtitles and more difficulty levels), a third disc is included in the double jewel case. Labelled 'VR', this supplement is the heart of *Integral*'s existence.

Essentially, this is a test disc with levels from the training section of the original game mixed in with an impressive number of new ones. The proceedings are divided into distinct modes: 'Sneaking' has you negotiating a series of levels, looking for the exit without being detected by the patrolling enemy; 'Weapon' mode requires you to clear a quintet of weapon-specific levels for each of the ten firearms offered; 'Advanced' mode has you do the same, only the tasks are supposed to be trickier.

Finally, there's the 'Special' mode. Easily the most attractive, it consists of a series of one-off missions, time battles or puzzle levels which offer you, among other things, the chance to play as the Ninja so predominant in *Metal Gear Solid*.



Format: PlayStation

Publisher: Konami

Developer: In-house

Price: ¥5,800 (£30)

Release: Out now (Japan);
September (UK)

The trouble with all of this is that, predictably, you're forced to play through and complete the Sneaking and Weapon modes before unlocking all of the more interesting and challenging Special material. This wouldn't be so bad were you not forced to clear these in practice prior to undertaking the obligatory time-trial equivalent.

Ultimately, it's all a bit laborious, and very Japanese. The emphasis is focused on improving your times and scores by repeatedly going back to previously accomplished levels - which is something that eastern players appear to relish.

As a complete package (the game and VR disc), *Integral* obviously represents an unmissable proposition for Sony's army of gamers. But judged on the basis of an add-on disc (as it is here), it barely manages to conceal its cash-in status.



Edge rating:

Six out of ten



The more interesting stuff, such as taking control of the Ninja for a few missions (top), only occurs after some time is spent beating previous training levels

BUGGY HEAT

Format: Dreamcast

Publisher: Sega

Developer: CRI

Price: ¥5,800 (€30)

Release: Out now (Japan)



Buggy Heat's presentation is solid, with a reasonable array of options, including a time attack and a (limited) training mode. The twoplayer mode proves most fun



Witness this curious angle, which, as if you are a passenger, shows the drivers limbs at work on the controls



Bouncing along amid the pack of racers is a great sensation, but there's no real feeling of competition that something like *Gran Turismo* offers

Of the original generation of Dreamcast software, CRI's lesser known, but quietly anticipated, *Buggy Heat* has finally struggled free of the development process. While racing dune buggies is little to write home about, it's welcome after the many me-too rally games that have recently poured on to the shelves.

Certain games, even if they lack the essential ingredients to catapult them to fame, still possess an intrinsic appeal, and *Buggy Heat* is one of them. Both racing titles, comparisons with Nintendo's sublime *Wave Race 64* are appropriate, with neither title offering the kind of flash, often false, attractions of big name releases. And it's the attention to detail that makes *Wave Race* so satisfying where CRI's creation is lacking. *Buggy Heat* was thought to have been set to benefit from an extended development period, but instead it's been pushed out.

That's not to say that the game is

without merit. The buggies are animated with a sound physics engine and are graphically detailed, while the eight tracks are thoughtfully constructed. And while nondescript characters are cast as the drivers, the colourful vehicle designs go some way towards making up for the deficit.

The actual driving experience is fine, although the controls don't offer the arcade-style handling suggested by the cartoon visuals. Instead, you have to fight the buggies through long powerdrifts and across alternating surfaces. The tracks, particularly the later Peruvian one, with its steep inclines and tight bends, show that the designers understood how to entertain the player. Sadly, a grand total of eight rather short courses

is a bit on the mean side nowadays.

Other Dreamcast niceties, such as the ability to support a decent twoplayer mode and a facility to upload your best times to CRI's Website, are put to good use. A stable, swift framerate is maintained throughout, while the music is rockin' awful. Nothing unexpected, then.

While several furlongs ahead of stablemate *Aero Dancing* in the quality stakes, *Buggy Heat* does nothing to remove the question mark hanging over CRI's ability to produce top-notch software. *Heat* is fun while it lasts, but sadly that's not very long at all.

Edge rating:

Six out of ten

SHUTOKOU BATTLE



At least the sensation of speed is good, and everything runs at a smooth 60fps

Felonious high-speed rivalry at midnight along Tokyo's internal Shutokou motorway network was always going to make perfect videogame representation. Yet, at some point, Genki appears to have taken a wrong turn.

Based on the aforementioned road system, *Shutokou Battle* offers only one track. Admittedly, it's rather long (with a couple of alternate routes), but nothing like the vast amounts of Tarmac today's gamers have come to expect from a racing game.

At least there are more cars than tracks. While not in *Gran Turismo* numbers, a wide selection of (mainly) Japanese models are available from the start, and although officially unlicensed, their representation is



Even shoddy PS racing games manage better crash dynamics



There's only one track, although you can drive it in either direction. Don't expect the dreary experience to drastically improve as a result, however



accurate enough to ensure immediate recognition by car enthusiasts.

The fastest way to get on to the road is to select the Quick Race option, which sees you either pitted against a rival, or engaging the Battle mode – the latter being better. Here, you face a series of adversaries individually, and the objective is to remain ahead of them until their spirit-point bar runs out. How fast this happens depends on how much distance you can put between the two of you. Of course, should your opponent overtake, it's your bar that decreases.

The Quest mode also adopts elements of the Battle mode, but throws in a couple of twists. As you drive freely around the motorway system, you encounter members of different gangs. Should one of them look as though he requires a driving lesson, you simply flash your lights

and the race is on. The winner is rewarded with currency which can then be used to purchase better cars, or tune your existing one.

If any of this sounds exciting, **Edge** apologises for having misled you. Any potential harnessed within this concept was long run over and left to rot by the roadside. *Shutokou Battle* is astoundingly dull. Even if you forgave it its dreadful handling (cars turn on a single axis and appear unwilling to display anything resembling grip), mediocre sound effects and appalling collision dynamics, it's not likely that you'd be playing this for more than ten minutes, having by then exhausted most of the game's main prospects.

Stupefyingly disappointing.

Edge rating:

Three out of ten

Format: Dreamcast

Publisher: Genki

Developer: In-house

Price: ¥5,800 (£30)

Release: Out now (Japan)



The two-player version doesn't even feature civilian traffic (top). At times, battling with the CPU-steered opponents can be reasonable fun, but it's shortlived

QUAKE II

Format: **Nintendo 64**Publisher: **Activision**

Developer:

Raster ProductionsPrice: **£40**Release: **Out now**

While no GoldenEye, Quake II is brilliantly designed and executed

Less a conversion, more a game rebuilt almost entirely from scratch, the N64 *Quake II* comes as a most pleasant surprise. Undoubtedly aware that the dismal port of the original *Quake* was not only poor in execution, but hard to recommend in the light of *GoldenEye* (the simple switch-pulling remit looking increasingly creatively bankrupt), Raster Productions has taken the admirably painstaking and time-consuming step of recreating the PC best-seller with a set of entirely new levels.

The result is a fresh perspective on one of the gaming industry's best-loved titles. Although still basic in comparison to Rare's *Bond* simulator – and the upcoming *Perfect Dark* – efforts have been made to offer a more objective-based experience. Hence missions that require explosive charges to be found, data discs to be stolen, and information to be downloaded – welcome supplements to the age-old formula of blasting enemies and opening doors. It's a far more intriguing proposition than a direct port of the original's overrated singleplayer game, even if it is disappointingly short-lived.



The weapons in the game remain exactly the same as in the PC original, with the Railgun proving to be the most devastating – in the right hands

But it is in multiplayer that *Quake II* really impresses, and Raster's true triumph is in realising a fourplayer game that is as hectic and whip-fast as the original networked article. Indeed, control is remarkably swift and efficient, and it's completely customisable, right down to the speed of turning on the X and Y axes. The PC veteran, coming to the N64, can expect to find a game that offers the kind of responsiveness and agility that they are well accustomed to, while players ignorant of the game's origins will find something far quicker and more brutal than *GoldenEye*. It is a quite remarkable and wholly enjoyable achievement.

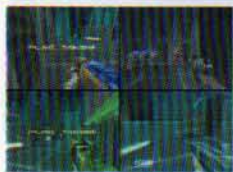
Technically, too, the game shines; the graphics are clean, and, strangely for *Quake*, colourful. Raster has implemented the 4Mb Ram Pak in a unique fashion – rather than supplying a framerate-destroying hi-res mode, the extra memory is used to keep the

game running smoothly and at speed, somewhere in the region of 30 frames per second. Even so, there have been sacrifices, most noticeably some missing frames of animation – enemies move in clockwork fashion, and firing off a gun is disappointingly jerky. The enemy AI is as basic as ever, and definitely found wanting in comparison to, say, *Turok 2*'s remarkably cunning adversaries. There's no hiding behind rocks here – simply the occasional duck.

But *Quake II* was never about subtlety. What can be found here, ultimately, is an impressive straight-down-the-line blaster that contains some of the finest multiplayer gaming ever seen on a console. And that alone is reason enough to recommend *Quake II* as a successful N64 release.

Edge rating:

Seven out of ten



The N64 iteration of Quake II focuses on pinpoint analogue control and speed of response – making for a particularly fine multiplayer game

PlayStation development: roll your own

With the Yaroze, Sony set out to make a basic PlayStation development system available to anyone. While this bold move succeeded in generating a lot of interest, not everyone was happy. It was expensive (especially if you already owned a PlayStation), and there was no way to run Yaroze games without a PC to download the data from. So people looked for ways to develop games on a standard PlayStation.

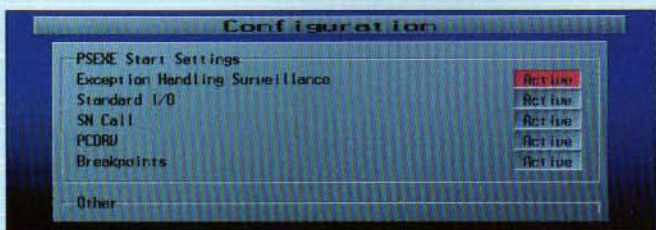
This should be a simple proposition. The GCC compiler used for the MIPS processor in the PlayStation is freely available, and most chipped PlayStations can run code from CDR discs. So it is possible to write a CDR containing homemade code and run it, but there's one major drawback – every change to the program must be burnt onto a new CD. So while CDRs can be used to distribute and demonstrate fully debugged programs without needing a PC, for actual development they are virtually useless.

The common solution to this problem is to employ a PlayStation 'cheat cartridge' – most frequently an Xplorer or Action Replay model. Both feature a port which allows a PC to be linked to them, and code can be downloaded over this into the PlayStation's memory for execution. Some cartridges already have this functionality built in, while others must have their normal ROMs replaced with an alternative program – the most popular is the Japanese group K-Comms' 'Caetla', which not only provides code uploading, but also a range of other functions useful to developers.

An even simpler method is to use the PlayStation's own serial port for uploading. With a cable to link it to a PC serial port, and some code burnt on to a CDR, any PlayStation can be used in this manner. This is, in effect, what the Yaroze is – a PlayStation with a special serial lead and boot CD. Some people have used modified copies of the Yaroze development tools with a normal PlayStation in this configuration.

With methods available for uploading code for execution on a PlayStation, and the GCC compiler and assemblers freely available, only one problem remains for would-be PlayStation coders – libraries. This has been the biggest stumbling block for legitimate home PlayStation development without a Yaroze. The PlayStation is quite a complex machine, and, without Sony's extensive code libraries (which are supplied in cut-down form with the Yaroze), programming it is extremely difficult. Some less scrupulous users simply use pirate copies of Sony's official libraries. Others use the Yaroze libraries, which can be found on virtually any PlayStation CD containing Yaroze programs, and for which header files have been produced and are available on the Net. More pioneering developers are working on documenting the internals of the machine and devising their own libraries for it.

These efforts show that the spirit of bedroom developers is very much alive, even in a market now dominated by superpowers. The question still remains, though, as to whether the people involved will stick with the PlayStation long enough to produce anything that affects the mainstream market, or simply drift off to investigate the next interesting machine that comes along – Dreamcast or PlayStation 2, maybe. The only certainty is that as soon as each next-generation machine arrives, someone will be poking around inside to see what makes them tick.



A homemade PlayStation graphics demo (above left). Some of the features provided by the 'Caetla' tool for developers from the Japanese group K-Comms

WorkStation

One of many devcos working out of Guildford (an area that is fast becoming Britain's own Silicon Valley), Mucky Foot is currently beavering away on *Urban Chaos* (see p27). Looking at these shots of its offices, however, it's hard to see how much work gets done at all. Developers with even odder setups should send the evidence immediately.

Mummified frog "This lives on systems programmer Guy Simmons' desk. He kisses it daily in the hope that it will one day turn into a handsome prince"



The ever-alert Ripper "This is actually the view between Guy Simmons' legs. What a beast!"

Inoperative fire alarm fuse that probably says more about the Foot guys' laid-back approach than anything else "Health and safety? What's that, then?"



In-house swimming pool "[From left] Ollie Shaw, Mark Adami and Mike Diskett relaxing after a hard day's work"

Members of the development community (sane or otherwise) are invited to email WorkStation submissions to edge@futurenet.co.uk



The trials of a start-up developer: part 13

After co-founding Lionhead Studios with Peter Molyneux, **Demis Hassabis** set up his own development house, Elixir Studios. In this exclusive diary, he considers the merits of developing a game for a new breed of gamer, where violence doesn't pay

From the hip

"There's a huge debate in the media at the moment about violence and computer games. It reminds me a bit

of the time when parents debated the effect of 'Grange Hill' on young minds. The BBC even had a live debate featuring parents in cords. Don't laugh – it actually happened.

During May this year, a large number of videogame companies, including id, Sony and Eidos, were cited in a \$130 million lawsuit by the families of three victims killed in last year's school shooting in West Paducah, Kentucky. Another massacre, this time in Littleton, Colorado, further fuelled media hysteria. Computer games create killers – or so they say, at least.

sold a staggering four million copies; Mattel's *Barbie Fashion Designer* game got to number one in the charts in the US...

At the very least these games prove that you don't need large amounts of blood to make a hit game.

There are two reasons why games have historically relied heavily on violence. First, gamers were typically adolescent (or at least the first generation was). Second, the technology limited gaming environments, making more complex interaction impractical.

Before the PlayStation revolution, a very large number of gamers were men aged 16 to 25. Violence obviously appeals as a theme, a fact reflected by the success of titles like *Doom*. However, in the space of a few years these very same people have become largely atypical of the

gaming demographic as a whole. The adoption of games into the mainstream has created a new generation of gamers who aren't 16 to 25 years old and very probably aren't even blokes. The original generation of gamers are now in their late 20s. As the gameplaying demographic broadens, so must the games themselves.

It's not like we can blame the technology any more. In terms of their ability to interact with players socially, early computers were distinctly Cro-Magnon. Killing is a very basic interaction, and one that's comparatively simple to program. Anything more than that is considerably harder. It was inevitable that most games would involve interaction in the form of killing and being killed. Now it's all changed. The advent of powerful computers and sophisticated artificial

"We need to come up with more creative and imaginative ways of engaging people. If our industry is serious about becoming massmarket then we have to start taking more responsibility for what we create"

For the record, I'd like to say that I think it's totally unfair to blame this kind of violence on games. I would suggest that it's the laws that allow people to walk around with more guns than a small army that might be the problem. That this doesn't happen elsewhere in the world with anything like the same frequency would seem to support this. In Europe and Japan we play the same games, watch the same movies and listen to the same music, so why doesn't this sort of thing happen here? The reason is guns.

Having said that, though, if the games industry is actually serious about becoming massmarket then we have to start taking more responsibility for what we create. We need to come up with more creative and imaginative ways of engaging people in the increasingly complex environments we create. Killing everything that moves seems like a pretty basic premise for a game, even if you are doing it in gloriously realised graphical worlds. Up to now that's been great – after all, we all love our *Quake*. But for how much longer can we justify churning out the same stuff? Don't get me wrong, I'm not saying that certain types of game will die out – there will always be a place for deathmating. But I think that we will start to see a new breed of games that hitherto we could have only dreamed of.

After making *Theme Park*, I spent a lot of time thinking about the reasons why the game was so successful. I still find it hard to believe that it's sold over four million units. It's still in the top 20, five years after its release. One of the main reasons for its success, I think, is that there's no violence in it at all. Many women and children bought and played *Theme Park* for this reason. I've been looking at game sales over the last couple of years and there are a number of games that have been extraordinarily successful without so much as a gun in sight. *Sim City 3000* has already sold over two million copies; Microsoft's *Flight Sim '98* has



Quake II (top) might kick arse, but Hassabis believes complex worlds, as in *Theme Park* and *Creatures* (both above), are the way forward

intelligence techniques allows for ever more complicated forms of interaction. These open up a world of gameplay opportunities. Computer worlds will be populated by intelligent agents with a range of cognitive skills and emotions (like jealousy, hatred and fear). It's no accident that Sony's next-generation PlayStation chip is called the Emotion Engine.

Advances in two areas of programming in particular have made this possible. Computer game programmers are now right at the cutting edge of artificial intelligence (or AI) and in some cases, are actually leading it. Games like the *Sims* (by Maxis) utilise simulation and AI technology to create virtual worlds that live, breathe and exist independently of player participation. The incredible advances in 3D graphics are allowing us to create worlds that are increasingly photorealistic. Improved graphics help to sustain the illusion of reality, making game worlds more believable and more immersive. What all of this does is allow game designers to create more ambitious game designs. Or, it should.

As game designers, we should be pushing the medium forward by looking at more sophisticated topics. The industry as a whole can be narrow minded and self-referential. The approach of the next-generation PlayStation should encourage us to compete with more traditional forms of entertainment, like film, and that means tackling subjects other than death and destruction. I'm not suggesting making a game based on coal miners in 19th-century Sheffield, rather that we should try something more than just a computerisation of toy soldiers or cowboys and indians. I'm talking about creating more complex worlds where players enter alternate realities so convincing and so involving that they experience the whole gamut of emotions. I can't wait for the day when games come along that will spearhead this revolution and light up the way."



The trials of a rock'n'roll games publisher: part three

Brian Baglow, public relations manager at Rockstar Games, recounts the tricks and traumas involved in producing *GTA2*, the sequel to one of the most successful games in recent years...

Grand Theft Auto was notable for its many innovative features, but the music and sound effects also received much praise. Bucking the industry tradition, DMA decided not to lock someone's mate in a bedroom for a week with his guitar and a distortion pedal. Instead, we designed the audio into the game itself.

A good game relies on audio – sound effects and music – as much as it does graphics. It's dead easy to grab a sample of a particular noise from a library disk and bung it into some code, but the chances are it won't fit or work properly. The idea with *GTA* was to use layers of sounds to build up a completely believable city environment. Hundreds of different samples were used for the vehicles, pedestrians, explosions and various nasty deaths.

GTA2 takes things even further. **Colin Anderson**, DMA's head of audio, explains: "For *GTA2* we wanted to create a completely realistic and accurate 3D sound environment. To do this we had to use a 3D audio engine. Like the 3D graphics engines everyone has heard of (*Quake II*, *Unreal*, etc) a 3D audio engine allows you to create and play sounds exactly as they would appear in the real world.

"The most important trick is Dynamic Sample Layering. This is a new technique where, instead of a single sample, we use a number of samples to build up a single sound. Raymond (Usher – senior audio programmer) and Allan (Walker – sound designer) created it for *Wild Metal Country* and we're hoping to use it in all our titles from now on.

"In the original game you could retune the radio station or, if you really disliked a track that was playing, simply blow up your car. In *GTA2*, you can always blow up the radio station instead"

"For instance, the cars in *GTA* used a single sample which varied as it got closer to you. In *GTA2* we're using a number of samples to create the noise of an oncoming car. After careful experimentation (on the motorway at Dundee) we figured out the basic component noises you hear as a car moves past you. The first sound is that of the tyres on the road, then you hear the engine, and then you hear the wind over the car. Next, as the whole car is moving past you, you've got to take the Doppler shifting into account, too."

And that's just a single car. When you can have up to 20 of them in a built-up area, with two dozen pedestrians screaming and yelling curses, someone firing a machine gun and two police cars and an ambulance approaching, things get complex. And loud.

The way that the music has been implemented inside most games is still pretty unoriginal. Often, when you start, the music is played straight from the CD and continues until the end of the track, or the end of the CD, or you get killed. *GTA* broke the mould with its innovative use of 'radio stations' – each car in the city was tuned to one of seven different radio stations which played an eclectic variety of

musical styles. When you stole a car you would hear one of these stations on the car radio. If you left the car and stole another, chances are you would get another station playing in your new vehicle. It was cool, it was new and it worked.

GTA2 still uses the radio stations format, but now there will be 11 all-new stations which themselves feature in the 'city'. Some of the radio stations on the map will be local ones and the sound quality from them will be affected by the distance you are from the transmitter. In the original game you could retune the radio station or, if you really disliked a track that was playing, you could simply blow up your car. In *GTA2*, if there's a particular song which offends you, you can always blow up the radio station instead.

"We wanted to create something totally new for *GTA*," says **Craig Conner**, the musician responsible for most of the *GTA* music. "A lot of people were doing soundtracks which sounded identical all the way through. We wanted to do something for everyone. The country-and-western music was a bit of a surprise, though – there was so much interest in it, we ended up having to create a whole new station."

"We've also totally revised the technology we're using to play audio tracks," says **Raymond Usher**, *GTA2*'s senior audio programmer. "In the first game, when the player changed cars we had to change the CD track as each track was a different 'station'. Unfortunately, with some CD players, this created an unavoidable seek time. In *GTA2* we are using a completely new system of streaming

.wav files. This almost eliminates any pause when changing tracks. It also lets us do some clever things to create more realistic radio stations."

Paul Scargill, *GTA2*'s other audio programmer, elaborates: "By using streaming .wav files we can mix things dynamically. Now the radio jingles, DJ news stories, and so on, can be mixed in anywhere, rather than appearing in the same place every time, and the radio stations continue to play even when you're out of the car, unlike the last time. It means that we're going even further to create a more random – and hopefully more believable – soundtrack"

The whole of the soundtrack for the original was written and created by DMA. Since *GTA* was released, however, more and more game companies have started to license tracks from well-known artists. While there can be benefits, there can also be some major drawbacks if you're not careful. "No matter how good a track is on its own, it has to work within the context of the game," reckons **Stuart Ross**, DMA's composer, responsible for the music in both *Body Harvest* and *Silicon Valley*.

Rockstar Games has a strong background in the music



Moving Shadow label boss Rob Playford (top) and dance act Flytronix join DMA (above) to create music for *GTA2*

industry. When *GTA2* was being planned, one of the things that both DMA and Rockstar were keen on was to exploit these links and find some music that not only fitted the game, but would lead the soundtrack in new directions. A partner in this was found in the shape of Moving Shadow, one of the most cutting-edge and ridiculously cool dance labels in the world today. Founded and run by Rob Playford, the man responsible for production on Goldie's 'Timeless' album, Moving Shadow is home to acts such as Omni Trio, Flytronix and EZ-Rollers, probably best known for the 'Walk this Land' single on the 'Lock, Stock and Two Smoking Barrels' soundtrack.

Rather than simply plundering the Moving Shadow vaults, Rockstar's Terry Donovan (ex-A&R bloke and dance music guru) and Rob Playford agreed that creating new tracks for the game would be the way forward. So it was that the mighty Flytronix took a trip to Dundee to play the game, sit down with us and create something entirely new.

GTA set a new standard for audio in games. *GTA2* is set to push things even further, with a complete, realistic 3D world, featuring music designed especially for the game by one of the most amazing drum'n'bass acts in the world. Not only that, the music is actually 'in' the game – and you can affect it.



an audience with....

richard darling

Few game companies have garnered as much respect as Codemasters, whose growing portfolio of hits have been both critical and commercial successes. Edge presents its secret weapon

Since 1986, Codemasters has developed and published games for all the major formats. And in that time, co-founder **Richard Darling** (whose official job title is game design director) has been overseeing his company's outstandingly consistent high-quality output. His passion for games has remained uncommonly robust – in an industry full of jaded and pretentious characters, Darling emerges as a refreshingly honest, surprisingly modest and instantly likeable individual. But above all, he remains a gamer. After a spin on the company's highly promising *Colin McRae Rally* sequel (see p44), **Edge** cornered Darling to chat about the past, present and future of one of the world's finest videogame makers.

Edge: What have been the most memorable moments since Codemasters' inception?

Richard Darling: The most memorable moment was deciding to set up Codemasters in the first place, which was quite a big decision because we had done quite well as freelance programmers and built up some money. We had to invest all of that and take out bank loans in order to set up the company, so it seemed to be quite a high-risk venture.

The last three to four years have been the most enjoyable, though, because we have been able to concentrate on fewer games and have more people work on them, and it's more enjoyable to work on games on which you feel you have really done the best development job. In previous years the sales were lower and therefore the amount of money we could spend on developing games was limited.

Edge: How 'hands on' is your current involvement within the company?

RD: Each game is a big team effort. But my personal involvement is in the early design stages and towards the end of the fine-tuning process.

Edge: Obviously, you've grown substantially over the years, but there must have been a point when you thought, this is getting big.

RD: Yes, there was. It sort of happened in probably three phases. And it goes with the phases of the hardware. When we started we were doing games for the 8bit machines – Spectrum, Amstrad, C64, etc – the whole business then was much smaller, it was pretty much a niche market. We started probably with five people, including myself, my brother and dad, and for quite a while we were between ten and 15 people in size. So at that time the company was quite small because we were partly developing games ourselves – I was programming on the Commodore 64 when I was 16 – but most of the games we published were being coded by outside contractors which tended to be individuals working from home, so we'd arrange a deal with them, decide on the game we wanted to develop and the design of it and once it was finished we'd do some QA checks – nothing like we do now – and then publish them. So the number of people needed for that kind of thing was quite small. It sort of took a step up in seriousness – in size, I suppose – when the Nintendo system [NES] was launched in America.

Edge: What happened to Codemasters then?

RD: The [NES] software sales, at that time, were outstripping the sales of computer games, and if you looked at a graph of the increase it seemed pretty clear that it was going to overshadow computer games quite rapidly. And we really felt we needed to get involved and produce software for this machine. So that was the big change, really. The problem we faced was that we made an approach to Nintendo to try to find out how we could develop for their machine, and we didn't get very far. They had a system for licensing developers to develop for their machine which – we may have been a bit naive, I don't know – but we felt like we were outsiders and weren't going to get into that circle of developers. So if we wanted to publish games for it we'd have to do it independently, which we then set about doing. And that was when, I guess sort of by chance, something happened. In order to develop for a console without any information from the manufacturer you need to obviously reverse-engineer the hardware – analyse it, take it to bits and find out from the electronics exactly what's going on in the system. So we got some people in who were specialists in that kind of area in order for us to write our own development libraries and create our own development system so that we could program it from a PC. And then we started writing games for it. One of the first games we started writing was *Treasure Island Dizzy*, I think. It had been a successful 8bit and Amiga game, and for the console we redesigned it to increase the size and have lots of features in it, but it was basically the latest *Dizzy* game that we started developing.

Edge: This was around the same time as the Game Genie. How did that concept come about?

RD: Through understanding the hardware in detail, probably more so than most developers who were just given a sort of development manual, myself, my brother and a guy called Ted Caron, who used to program on the Atari ST, came up with the



idea for what turned out to become the Game Genie. We sat one day, trying to think of a type of game that would be attractive to a wide audience.

One of the common things we thought, certainly at that time with Nintendo, was that in a lot of ways the games were more simplistic than they are nowadays. The challenge/reward mechanisms were more simplistic – you know, something like *Super Mario Bros*, which is a very, very good game, but it's really linear and there are things put in your way to stop you progressing when all you want to do when you play it is progress. And so the overwhelming thought for gamers is to want to get rid of those barriers and we thought that that's a fairly constant desire; it doesn't matter which genre it is – if it's a racing game it's being able to drive fastest... I don't think it's so applicable these days, though, as games are a lot more sophisticated.

So the idea of producing a piece of hardware that would allow users to actually modify their games – remove barriers, give them extra lives, make them jump higher – we thought that would appeal to a large section of people, and, as it turned out, it did. That was effectively a side issue for us, the company is primarily a games developer and publisher, but because it was such a good idea we followed it through and, to cut a very long story short, it did very well. Up until then we were a company that had been doing well and we were growing each year and making profit, but for a private company, in any industry, it's very hard to break out of the cycle of spending your profits, investing them for the next year to grow, and the growth rate is normally quite limited by the fact that you're kind of financing yourself from the previous years. But the Game Genie gave us a sudden injection of capital into the company and then we could sort of sit back and say, 'Right, what can we do now?' All of a sudden our options were much more open.

Edge: What was your reaction when Nintendo sued?

RD: Nintendo sued our distributor Galoob when they announced the launch of the Game Genie in America. Our reaction was a vigorous and intense effort to defend the action that they brought. We believed that we were right and there was nothing illegal about the Game Genie, but because it was an area of law without any precedent it was a difficult case to prove.

Edge: And when you won?

RD: The point where we ultimately won the court case was when Nintendo had exhausted all the avenues of appeal which, in fact, culminated in the US Supreme Court turning down its application for appeal on the grounds that it had already been decided by the court of North California. This was many years after the initial case was brought but we were obviously pleased that the issue had been finally settled.

Edge: Didn't Codemasters and Sega nearly end up in a court room, too?

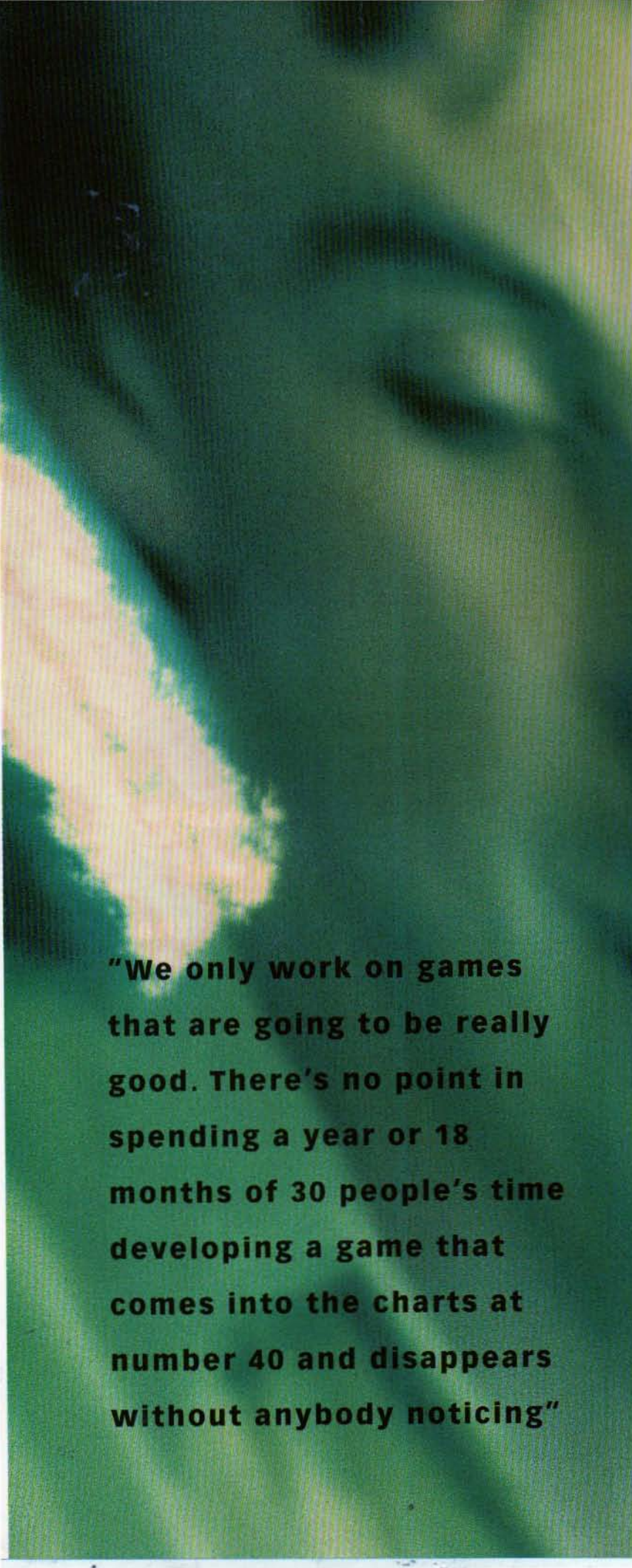
RD: In 1993 we had an episode with Sega where we tried to do a similar thing we'd done to the Nintendo system. We'd spoken to Sega again about being a licensed developer; we hadn't been happy that we'd be able to operate effectively without being disadvantaged. I mean, if you're going to develop games and publish them for a system and go through all the expense of doing the development and publishing, then you don't want to have anything unfair about the way you're trying to trade on the marketplace that puts you at a disadvantage compared to everybody else. I don't want to get into specifics, as I'm not sure that it would be legal for me to talk about it [laughs], but there were definite reasons for making a firstparty advantageous over a thirdparty.

So we looked – again, we'd already done this with Nintendo – at the legal framework we had in this country, and around the world, certainly in America as well. There is nothing inherently wrong in developing a game and publishing it for somebody else's system. There's no law that says, 'Nintendo have made a console and therefore they have the right to monopolise the software that's published for it'. But that's what they try to do with the licensee agreements. At the time there was an investigation going on by the Monopolies and Mergers Commission about this, so we decided again to reverse-engineer the system and develop our own games for it. There was a court case settlement which resulted in us being able to publish Sega games, which we were manufacturing ourselves, locally. Manufacturing our own games gave us a lot more control – we could manufacture whatever quantities we wanted, when we wanted – if there was an emergency where a certain game was more successful than we expected we could manufacture more very quickly.

Edge: Which takes you to the next phase...

RD: Codemasters was a much larger company – there were about 35 people at that time, I think – with much larger resources, and in design and development we would work very closely with the developers – who were all still freelance contractors. And we realised that as the team sizes became greater, it was becoming more and more difficult to keep a team together over the course of however long it took to develop a game – probably about a year. So we decided to set up an in-house development studio – and that coincided with the emergence of PlayStation. All the PlayStation





"We only work on games that are going to be really good. There's no point in spending a year or 18 months of 30 people's time developing a game that comes into the charts at number 40 and disappears without anybody noticing"

games we've done have been by the in-house studio. We still do contract some development work to external teams. For example, *No Fear Downhill Mountain Biking* is being done by UDS in Sweden – we produce the design and they develop it for us.

Edge: Recent years have seen massive growth and some first-class titles. Do you see this as a direct result of the fundamental change in Codemasters' development structure?

RD: We've been very pleased that it's been expanding very quickly – we're now up to 270 staff. It's something where we had a good hard think about what's going wrong with the development industry and what can be improved. We then came up with this completely different system, and the method by which we decide which games we want to develop, the selection process, the research we do, the relationship between the designers and the development team was all sort of decided back in 1994 or '95. We looked at every game we'd released since we started and wrote down what was good and bad about it, which ones were successful, which ones weren't, which ones surprised us by being more successful than we thought they'd be, etc. We created a spreadsheet of all of these events that we felt had been a positive or negative influence and then condensed that down to form the rules by which we created the new development system that we're using now. For example, one of the key factors was that it would be good to have the person leading the team of developers who was exceptionally talented. So the consequence of that is that every new team now has a producer, and their experience and skill can make a big difference. Four or five years ago we didn't realise that. We were using different methods from one team to the next. I think we concentrated maybe too much on the programmers, but since then we've been taking the original model that we arrived at through this analysis of what had gone well and badly in the past, applied it, and it's been an on-going revision process.

Edge: You're one of the few developers/publishers able to maintain remarkably high-quality output. To what would you attribute this?

RD: Our core philosophy has been to try to make sure that we only work on games that are going to be really good. There's no point in spending a year or 18 months of 30 people's time developing a game that comes into the charts at number 40 and gradually disappears without anybody noticing. Apart from financially, it's not a very rewarding workplace for people who do that. So we really want to ensure that every game we do is successful. They're not all number one successes, but if you believe through the development that it can potentially be a number one success, when faced with a choice where it can cost a lot of money to put a certain feature in, you always do anything that is going to improve the game.

And also in terms of never releasing a game until they're finished, I was looking at the charts this morning and thinking about all these games that have come out, certainly three were released last week that have been very successful, but why are they all released in the last week of June? Then I remembered that it's the calendar quarter of America, the year half of the UK fiscal calendar, and it's not a coincidence – these games have to be out on these dates. I'm not saying they all should have gone back – I think *Driver* is a brilliant game, and it's finished – but there's another game which almost didn't make its release date, and

although it's a good game, it's not quite finished. It's good, but it's sort of part way through the QA process.

Edge: Of all the Codemasters games, which are you most proud of?

RD: I feel that the progress that we and the whole industry have been making has been very rapid. Therefore the games which I am most proud of are the most recent – *Colin McRae Rally*, *TOCA 2* and *Brian Lara Cricket*. I'm proud of them because we have been able to put a huge effort into the development of each of them and I feel we have managed to create games without any real compromise. We spend whatever it takes to make the game as good as it can be. This is because the market for games has been growing very rapidly in the last few years and therefore the development money is available to spend on the games. We are also able to use outside resources without restriction. For example, in the current *Rally* project we are able to send groups of artists to the World Rally locations for photography, etc.

Edge: Most people would stick to Formula One, NASCAR's Mario Andretti, wrestling and motorbiking, but you have touring cars, rallying with the ever-popular Colin McRae, Prince Naseem and mountain biking sewn up. You seem to be particularly good at targetting the right licences and activities.

RD: You know, it doesn't matter how good a game is in terms of current standards, it's not going to be successful or it's not going to be of any interest to gamers if it's not doing something new. Okay, it's a very obvious statement, but you get people that say, 'We're going to do a game that is going to be as good as *Half-Life* but with some extra improvements,' or, 'We're going to do a game that is as good as *Quake* but with extra fancy weapons or something'. I think it's missing the point. If we go back to touring cars versus F1, it's unquestionable that they are equivalently exciting games. But I think the problem is that Formula One has been done – you can't make a quantum leap, whereas with touring cars we really felt that the sport had yet to be replicated – it's got the advantage of being exciting to motor racing fans, but the actual sport itself has got advantages over Formula One from a videogame point of view because of the fact that there are a lot of cars, they race close together, they shove each other a lot and the races are shorter: there are various things which make the sport better than F1 once it's gone through a videogame interpretation.

And we think that people want something new.

We actually started *Colin McRae Rally* development before *Sega Rally* came out in the arcades. I think it was right near Christmas when *Sega Rally* came out and we were bitterly disappointed. We thought that we were doing something really new. It's not just a case of being very, very good. So that's what we try to look for with the licences and things, you want a degree of fame and recognition, but to complement that the game itself has to be new.

Edge: Music was radically new. What was the thinking behind publishing it?

RD: We came across that quite late in development, but our sound guy Tim had proposed an idea to me about six months before which was quite similar, and I'd been hesitating a bit, saying, 'This is very different, but I don't really know whether people will be interested or not'. So I was going to do some research and hadn't got round to doing it, but we were very

"I'm really excited about the idea of modems and consoles, I really think that's going to change things. I know we've got modems on PCs to play games, but PlayStation games are outselling PC games at a ratio of ten to one"

interested in the idea. Then when Jester came along with a three-quarters-developed product we could actually see it working and thought it was brilliant. The reason we wanted to go ahead with it is because Codemasters is trying to publish software that we think is going to be successful and be exciting and attractive to gamers, and although it's not a *game*, we thought it could have very big appeal.

It's a bit like going back to the Game Genie thing. With the Game Genie we felt we created something that has got some kind of appeal to almost anyone, and I think that was true of *Music*. Almost anybody who plays games has got some kind of interest in music and they have different tastes and different styles, but *Music* covers quite a range of styles. And so, on the one hand we thought, well, it's not a game and it's a bit odd and people may not understand it, but if we could get the message across we thought it could, potentially, be one of the most successful games of the year. *Gran Turismo* was the most successful game of the year, I guess, but no matter how good it is, it only appeals to racing game fans, whereas *Music* is getting through to pretty much everybody.

Edge: What's your opinion of the current state of the videogame market? Isn't it ever demoralising to see clones and undernourished sequels appear from other publishers when you're striving so hard for quality here?

RD: I suppose it's different for you, because you have to look at them all, and I only have to look at the ones I like [laughs]. I'm still very excited about it. I mean, very recently, *Driver* is really a very good game, in lots of ways – it's very refreshing and quite different. Without going into the specifics, like the mechanics and the lighting effects, the general game is very, very good.

Edge: How do you see the market developing?

RD: In terms of what's exciting about the way people might be playing games, I'm really excited about the idea of modems and consoles, I really think that's going to change things. I know we've got modems on PCs to play games, but PlayStation games are outselling PC games at a ratio of something like ten to one, and I think that's because PCs are just so hard to set up and install and keep up to date with the 3D cards, and so on. Anybody can play console games – you could be a professional welder or, for example, a professional touring car driver; I know that some of them, in between races, go and play *Touring Cars* on the PlayStation. You could be interested in soccer and play soccer games on the PlayStation, but you couldn't on the PC. If you're not a technical person you almost certainly won't be able to get a soccer game working on the PC. For that reason, although multiplayer games are available and doing quite well, it's going to be a different thing when multiplayer capability becomes console-based. So, yes, we're putting quite a lot of effort into trying to think of all the different things we can do in the future with PlayStation 2.

Edge: The prospect of working on the new consoles must be exciting.

RD: Yes. Well, I'm very excited about PlayStation 2 [laughs]. I don't know, it would be hypocritical for me to say that we're very excited about Dreamcast because we're not actually developing for it. I mean, it's exciting when a new console comes out, and we may well start developing for it.

Edge: How do you see Nintendo, Sega and Sony's futures?

RD: I don't think I can predict that any better than anybody else, it's anybody's guess. I think one thing's for certain: I can't see Sony being squeezed out of the picture. I think Sony are going to remain... then Sega and Nintendo. Then there are others – and I don't know who, I don't have anybody in mind – but once you get game consoles that are connecting to the Internet via a phone line, cable and things, then that brings other players into the equation, some very powerful companies who could well get involved as games console manufacturers and as games publishers.

Edge: And where do you see Codemasters in five years' time?

RD: We really want to focus on producing game software. I know *Music* isn't a game, so it doesn't quite fit into that, but it's a product aimed at gamers for a games machine so our definition of games stretches to that. But, basically, we'll focus on games. We want to increase the distribution of games around the world and there are plenty of opportunities for that because we foresee that the games we're producing in the next few years will be even more hungry in terms of development resources – the amount of people working on them and the effort it takes to develop has escalated in the last couple of years. As far as I remember, the final budget for *Colin McRae Rally* was either £840,000 or £940,000, which is obviously quite a lot of money, and that's going up. People's expectation of PlayStation 2, the ability to recreate the real world, is phenomenal, and we're going to have to put more aspects in games, therefore we want to focus on trying to do the best games that we can.

Edge: After 15 years, what would you say is the best thing about being in the videogames industry?

RD: Constant change... and exciting people. It all makes it quite an interesting place to be.

E



FERRARI F355 CHALLENGE

SUZUKI-SAN'S AMBITIOUS RACER SCREAMS OUT OF THE PITS AND INTO THE HISTORY BOOKS

Developer: Sega R&D#2

Release: Out now (Japan)

Origin: Japan



It's not been confirmed exactly how many Naomi boards are used to power *F355 Challenge*, but accepted wisdom is four – one dedicated to each screen, plus a general 'grunt' unit. The authenticity of the visual results are totally without question

Following last issue's exclusive exposé, **Edge** has had the opportunity to spend some quality time behind the wheel of *Ferrari 355 Challenge*. As expected, reasons to fault Yu Suzuki's latest creation are far fewer than those to applaud.

Perhaps the most serious accusation that can be levelled at *Challenge* is that it is too realistic, too fine a simulation. **Edge** wonders quite how anyone other than the most hardcore racing fan (or a professional driver) will cope with the subtle demands of keeping the car on course. But then again, that's what the options are for.

Once seated deep inside *Challenge*'s foreboding three-screened cabinet, the array of controls proves initially alarming. Degrees of proficiency are accommodated for by both semi-automatic gear paddles behind the wheel, and a six-speed manual 'box' down to the right. Right behind that are the driving assist buttons, offering continuously variable traction control, steering assistance and the like. For maximum enjoyment, it's best to leave them off, as they numb the electrifying sense of involvement that *Challenge* generates.

Disappointingly, the manual gearbox

and clutch combination lack the kind of detailed feedback that make them properly useable. However, *Challenge* more than lives up to its name even when using the semi-auto paddles.

Slam on the brakes and the car shudders, dips and slides dangerously out of control. Lift off the accelerator after piling too fast into a corner and the car's tail swings loose. Fighting the wheel through tight bends, surrounded by matching Ferraris, one thought dominates the mind: virtual reality is no longer a pipedream. *Challenge* is, without a doubt, the ultimate driving sim to date.



STRIDER HIRYU 2

THE LEGENDARY NINJA IS BACK IN A SEQUEL TO HIS CLASSIC COIN-OP DEBUT, COURTESY OF CAPCOM

Developer: Capcom

Release: TBA

Origin: Japan



Capcom's striking level of presentation is in full effect. A wireframe map sketches out routes prior to levels starting, but it's a largely superfluous touch

It's been a weird decade for Strider Hiryu. After a flurry of activity in the late '80s and early '90s – which saw the release of his first arcade game, followed by a totally different NES adventure and a mass of home coin-op conversions (the ST, Amiga, C64, PC Engine and Mega Drive were all recipients) – his career bombed. Capcom did start work on a second *Strider* arcade title using proprietary M2-based technology, but then M2 fell through, and now the game has arrived on a somewhat unusual PlayStation-based board. Hiryu's recent cameo in *Marvel Vs Capcom* has perhaps prompted this comeback.

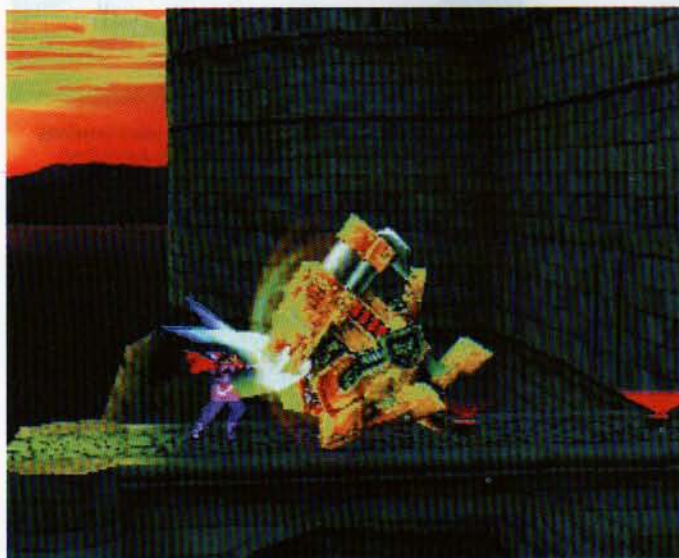
Interestingly, Capcom has taken the cautious route updating this title. *Strider* was a 2D side-scrolling platform actioner in a mould all of its own; *Strider 2* uses 3D backgrounds but combines 2D and 3D approaches to character design and retains the original's scrolling gameplay. The new game, however, allows the player to move in any direction (rather than follow a strict left-to-right route), giving a greater depth of interaction with the environments.

Other than that, it's business as usual. Hiryu must do battle with an evil collective known as the Light Sword Cyphers, through a series of



Hiryu's innovative 'electric cutlass' weapon returns, and is as devastatingly effective as ever

atmospherically dark manga-style environments. These locations combine gothic castles with futuristic spaceships and underground bases to create a punk-esque collision of visual styles. The new 3D characters and bosses also work well, but this is essentially a faithful reproduction of old-school arcade action, replete with simple interface and snappy gameplay. It should be all the better for it.



The original was remarkably unsubtle, and instalment two follows suit, with brash boss encounters and extravagant set pieces intertwined with the slash-happy, henchmen-hacking core gameplay. Though Hiryu himself remains 2D, the backdrops often use 3D perspective to show-stopping effect (above right)

FINAL FIGHT

Kingpin may be today's gang-centric game of choice, but street-fighting thugs have been staple components of action titles since the '80s. Capcom's dalliances with such themes are manifold, but there can be but one defining example...



Bonus sections included smashing up a car (famously resurrected in *Street Fighter II*) and panes of glass

The side-scrolling beat 'em up may represent videogaming at its most mindless, any concept of real strategy being passed over in favour of button-hammering speed, yet the genre enjoyed a spell as the cornerstone of arcade owners' money-spinning operations when the likes of *Double Dragon* rubbed shoulders with *Golden Axe* and *Ninja Warriors*.

Its simplicity, and therefore accessibility, was the chief reason behind its success. Unable to offer gamers the depth of something like *Street Fighter II*, with its then-daunting six-button controls and multiple-'instruction' special moves, the titles instead sold on style. And there were few more stylish than the examples that regularly rolled out of Capcom's Osaka-based development facility.

Final Fight set the agenda, depicting a bunch of brawlers, each rendered with the super-distinctive style that Capcom's Japanese artists had been painstakingly honing during the mid-'80s, against scummy city and industrial backdrops. Hands and feet were the chief instruments of dealing pain, but collectable weapons – among them knives and pipes – could be collected along the way, while snack-like health power-ups lay concealed within all manner of background ephemera.

Final Fight's template was one that was endlessly copied. It sold on the strength of set pieces in the form of imaginative bosses (the ultimate foe was, oddly, a supervillain in a supercharged wheelchair) and stage designs whose originality surpassed that of every example that preceded it by some margin.

Unlike one-on-one beat 'em ups, *Final Fight* could not be completed on a single credit, assuring its popularity with arcade operators. While it was as driven by commerciality as it was creativity, however, it stands firm as a landmark in gaming history.



A fighting ring (above) was one of many set-piece locations that *Final Fight* mustered up. Weapons were crucial (top)



Strictly speaking, it did not break any gameplay rules, but *Final Fight's* graphics set the trail for the likes of *Street Fighter II*: the stage of Balrog (aka M Bison in the Japanese version) stole themes from this scene (above). The game gave Capcom's artists the opportunity to flex their creativity, leaving a legacy that still lives today

Manufacturer: Capcom

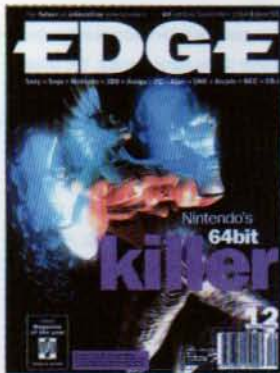
1986

Developer: In-house

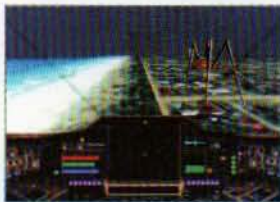
Coin-op

EDGEVIEW

The videogame world never stands still, riding the breaking wave of advancing technology. In this regular column **Edge** puts the industry's progress in perspective with a look at yesteryear's headlines: five years ago this month



Edge issue 12, September 1994



EA's *Shock Wave* attempted to maintain some momentum for the 3DO. And, well, failed

As the world looked to appraise the power of the N64 via Rare's *Killer Instinct*, demonstrated at 1994's summer CES in Chicago via a coin-op interpretation of Nintendo's technology, **Edge** was merely able to bring home a pair of CGI renders for its readers to pore over. But this was at a time when Nintendo was keen to exploit the remaining sales potential of its 16bit SNES hardware with *Donkey Kong Country*, whose ACM (that's - ahem - Advanced Computer Modelling) graphics lulled some of the more excitable CES attendees into believing they were witnessing something akin to the coming of the Messiah. Elsewhere, **Edge's** reporter had a dabble with *Cruis'n USA*, finding it 'reassuringly playable'. (Must've been too much coffee.)

As Panasonic prepared to launch its 3DO format in the UK, news leaked to **Edge** regarding a successor to the format, codenamed Bullfrog, which famously became M2 and then Dead Duck.

Prescreen lowlights included *Mortal Kombat II* (this must have been a bad month), while 3DO *Shock Wave* arrived for review, setting a mediocre-quality trend that would eventually consign the format to the bin.



Clockwise from top left: an accident waiting to happen; the sum total of *Killer Instinct* visuals available at CES; 3DO *Off-World Interceptor* from Crystal Dynamics; Goldstar's interpretation of the 3DO dream

Did they really say that?

"We're creating a CD-ROM game on the SGI. It's a fun game about being a rock star" - an optimistic **Jon Hare** from Sensible Software, talking about *Sex, Drugs & Rock & Roll*

Did Edge really say that?

'**Shigeru Miyamoto** was also there, and **Edge** managed to ask [his opinion of *Donkey Kong Country*]. "Ah, nice graphics," laughed the shy and likeable programmer. Programmer?'

Testscreens (and ratings)

Outpost (PC; 8/10), *Top Hunter* (Neo-Geo; 5/10), *SSFII* (MD; 8/10), *Wolfenstein 3D* (Jag; 7/10), *TIE Fighter* (PC; 7/10), *Shock Wave* (3DO; 5/10), *Kikkikai 2* (SFC; 7/10)

PIXELPERFECT

Every gamer has occasional moments of sparkling excitement, be it the first time *Speedball* booted up, or completing *Sabrewulf*. Here, *Colin McRae Rally* producer **Guy Wilday** peels back the years in reverence of *Wizardry* on the Apple][

They say that those early formative years will shape your whole life. The experiences that you gain when you are young will influence your future. And, for me, a major influence came in the form of an Apple][computer. I think it was purchased for my dad to do his accounts on and to this day I'm not sure that he got chance to do them. I remember spending a lot of time with the *Brickout* game that was included, with its paddle controller. But it was later that the really cool games arrived. I was completely engrossed in such classics as *Choplifter*, *Hadron*, *SkyFox* and *Star Maze*. But of all the many early games I played, *Wizardry* was the

first to really grab my imagination. I remember spending many evenings navigating the dungeon using the primitive vector display, tentatively pressing the keys for fear of what would be encountered in the next footstep, and even my pulse rate increasing during the simple text combat sections. For the first time, I had lost myself to a computer game. It's difficult to understand now what was so engrossing when you look at the technology involved, but I think I learnt that a game is so much more than the machine that it's running on. And I also learned to tread carefully when walking through dark corridors..."



Survival horror on the Apple][? Codemasters' Wilday believes *Wizardry* had it all





Sony Cyber-Shot DSC-F55 2.1 Megapixel Digital Still Camera

■ *£650 ■ Contact: 0990 111999

The latest company to jump upon the two-million-pixel bandwagon, Sony has produced yet another sleek digital camera. The snappily titled DSC-F55 produces high-quality pictures, thanks to its 1.92-million-pixel CCD, and features all the usual special effects, including solarising, negatives, monochrome and sepia. As an added bonus, the Cyber-Shot can also shoot short MPEG movies and sounds, perfect for pasting up on your homepage.

An ideal little snapper, then? Well, almost. The DSC-F55 is wonderfully compact, but sadly this means that anyone with large hands will find it quite fiddly to use. The rear-mounted LCD, which soon picks up any grime from your dirty mitts, is also incredibly difficult to make out on a sunny day, a problem compounded by Sony's infinite wisdom to not include a separate viewfinder. Finally, the use of Sony's exclusive Memory Stick as a means of saving your photos means that the data isn't always easy to transfer.

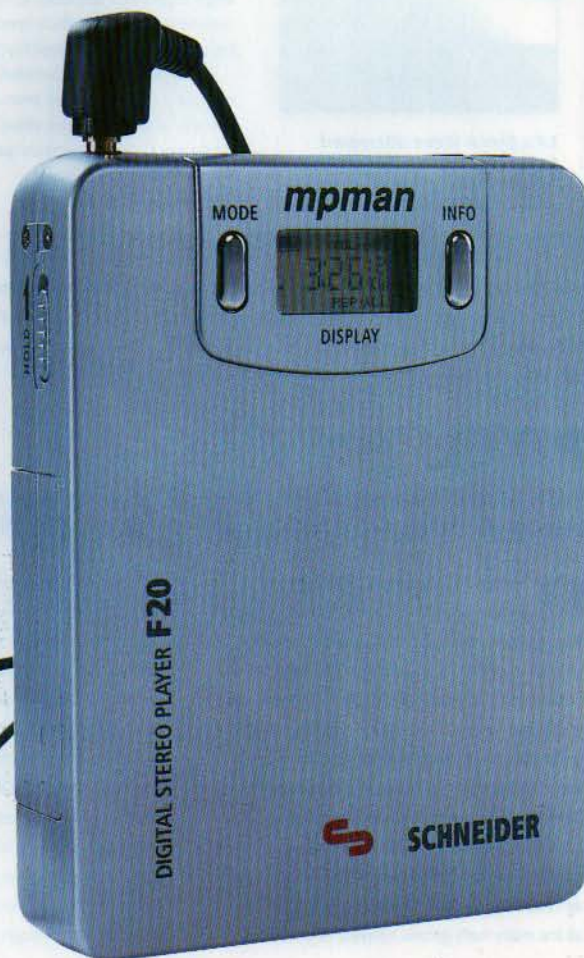


Schneider MPMan F20

■ *£160 ■ Contact: 0171 374 0101

The MP3 revolution continues with record companies getting their contracts in a twist as pirating becomes easier than ever before. For those not in the know, the controversial MP3 allows you to compress complete CD tracks into manageable data files, giving you near CD-quality sound. And, being simply a PC file, the data can be listened to on some of the sexiest little players known to man.

The Schneider MPMan F20 is smaller and lighter than a packet of 20 Benson and Hedges and delivers surprisingly good sound, if a little tinny at times. Downloading tracks is a doddle: simply install the *MPManager* software, connect via your parallel port, and drag and drop files into the F20's window. With 32Mb of internal memory giving you about 30 minutes of music, plus additional slots for SmartMedia to bump up its capacity, the F20 is guaranteed to draw lustful glances all round. Oh, and its solid-state nature means you could go trampolining and the tracks won't jump.



Zappy Electric Scooter

■ *£550 ■ Contact: 01764 655331

It may not be a Harley classic, but the Zappy Electric Scooter will certainly have the ladies pointing and gawping in your general direction as you nip by.

Although, unfortunately, the fairer sex will no doubt also be laughing like drains.

Hardly the fastest thing on two wheels, this electric version of the throtier, two-stroke powered GoPed reaches ten miles an hour on a good day (with no headwind), and needs a recharge after a mere five-mile jaunt.

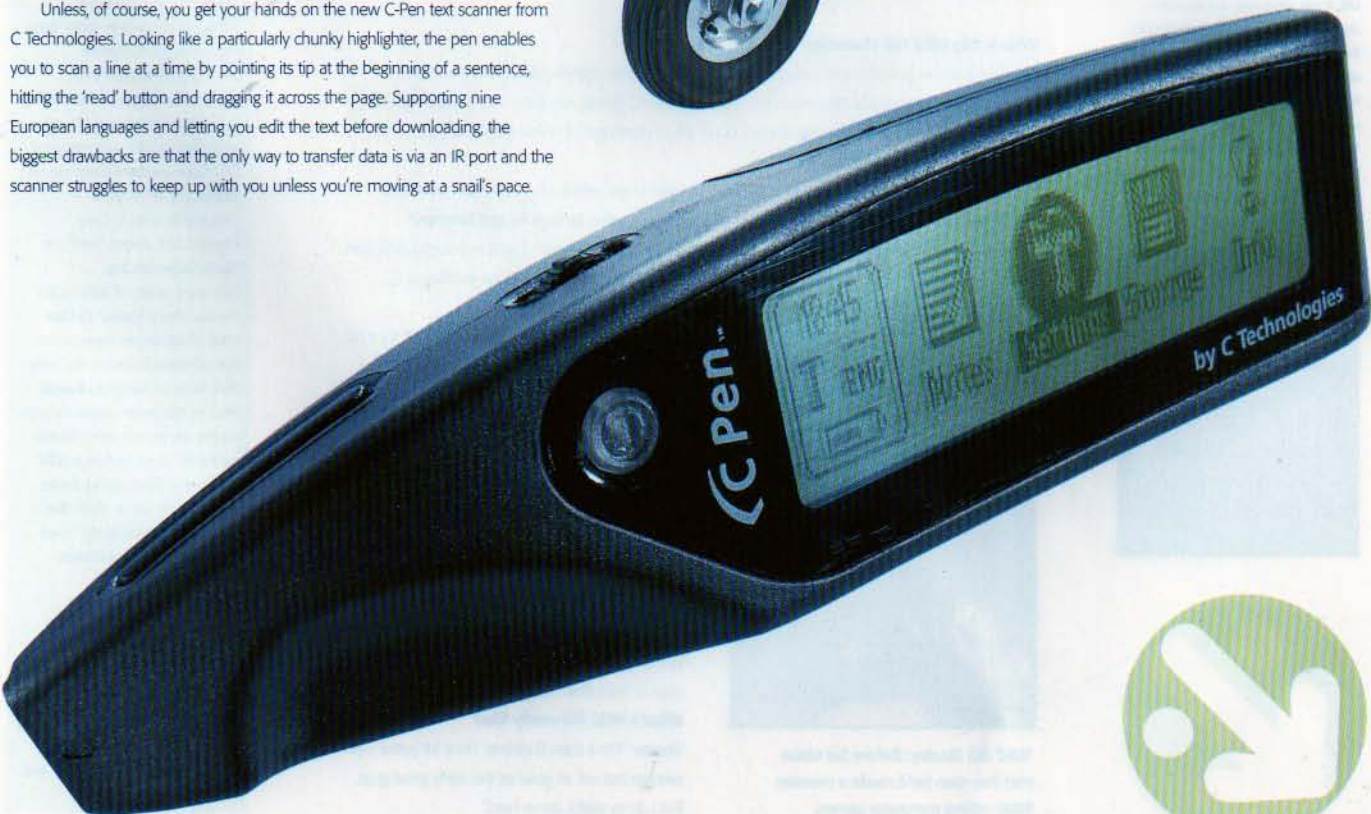
Nevertheless, it's incredibly good fun. Skittering down a hill before tacking a corner, despite the Zappy's size and relative light weight, calls for all the skill you can muster. And while you can collapse it down to resemble a skateboard with a carrier handle, it's not intended for long journeys. At its best buzzing around town, the Zappy will raise a few smiles, and has to be one of the summer's best, if rather expensive, electric toys.

C-Pen Text Scanner

■ *£294 ■ Contact: www.cpen.com

In the old days, students who wanted to plagiarise great masters had to spend many a long hour down at the library, laboriously copying out great chunks of textbooks for their thesis. Now, the advent of the cheap scanner and optical character recognition technology, via which your PC can scan in printed matter and translate it into a text file, means that ripping someone off has never been easier. The only trouble is, scanners hardly lend themselves to portability.

Unless, of course, you get your hands on the new C-Pen text scanner from C Technologies. Looking like a particularly chunky highlighter, the pen enables you to scan a line at a time by pointing its tip at the beginning of a sentence, hitting the 'read' button and dragging it across the page. Supporting nine European languages and letting you edit the text before downloading, the biggest drawbacks are that the only way to transfer data is via an IR port and the scanner struggles to keep up with you unless you're moving at a snail's pace.





Pikachu gets his wings



Not only is the 232-foot long 747-400 decked out with Pokémon outside, but the cabin crew have to wear appropriate uniforms, too



Japan/US: When it was just a Japanese phenomenon, it was okay to laugh at the three planes All Nippon Airways had painted with Pokémon characters. But now it's really serious. ANA has taken the service

international with a five days-a-week service between Tokyo and San Francisco. Passengers can even purchase duty-free Pokémon goods, although at ¥1,000 (€5) for a plate, you're better off sticking to scotch.

Brand values

UK: It was something of a surprise to discover this Peugeot advert (below) in the mainstream press. Not because the advert was for the rather sweet, road-hugging 106 GTI, but rather that it used PlayStation imagery with the line 'Do not underestimate the power.' That a car manufacturer would even consider borrowing videogame marketing tactics is further evidence of Sony's omnipresence.



FAQ: 'Wild' Bill Stealey

Who is this Wild Bill character?

JW Stealey on his business card, and 'Wild' Bill everywhere else, founded Microprose with Sid Meier back in the 'good old days when you could grow a PC games company into a multimillion dollar business inside a decade. He's now CEO of IEN, a developer of online game content.

A pretty hardcore gamer, then?

No, he was an accountant and an airforce pilot. He meet Meier working for General Instruments.

So, he was just lucky to bump into a strategy game genius before he got famous?

Apparently not. Meier may be brilliant, but according to Stealey if he hadn't had someone to deal with the business side, he'd still be working at GI.

So what happened then?

Stealey left Microprose in '93, played golf for a bit, got bored, then decided to get back into games.

But what's the deal with this online stuff?

IEN develops online content, such as combat sim *Warbirds*, and supports its online communities.

Flight sims? Oh dear.

Well, *Warbirds* has over 10,000 regular users and if they can stop the Russians cheating, they might make some money.

What do the Russians have to do with it?

They love the game so much that a gang of them use dodgy credit cards to play. It takes about three days to track them down, then they get new cards.

What's Wild Bill really like?

Stealey: "I'm a class-B athlete. I'm a bit better than average but not as good as the really good guys. But I do try awful damn hard."



'Wild' Bill Stealey: Before Sid Meier met this man he'd made a massive \$800 selling computer games.



DataStream



- Number of times the Pac-Man coin-op has been played: **10bn**
- First week sales of *Dino Crisis* in Japan: **400,000**
- Number of Dreamcasts sold in Japan in the two weeks before its price was slashed, according to *Famitsu* magazine: **479**
- Number of Dreamcasts sold in Japan in the week following the price cut: **25,249**
- Cost of computer viruses to worldwide business so far in 1999: **\$7.6bn**
- Estimated auction price of the first Apple computer: **\$40,000**
- Percentage of PC-owning Americans who used their machines at home in 1995: **90%**
- Percentage of PC-owning Americans who used their machines at home in 1999: **53%**
- Percentage of Gamespot's online readers who felt it was important that action games allowed players to save mid-level: **90%**
- Bonus Eidos paid to Core Design's MD, Jeremy Smith, for *Tomb Raider*: **€3.7m**
- Estimated wealth of eBay's CEO the day after it floated: **\$112m**
- Price of Ask Jeeves shares when the company floated on the New York Stock Exchange: **\$14 each**
- Price of Ask Jeeves shares by noon on the day the company floated on the NY Stock Exchange: **\$72**
- Number of digital set-top boxes in worldwide use in 1997: **6m**
- Number of digital set-top boxes predicted to be in worldwide use by 2005: **52m**
- Net losses sustained by GT Interactive in FY98: **\$52m**
- Number of copies of the full PC version of PlayStation emulator *bleem!* sold via its Website: **20,000**
- Percentage of search engine hits that turn out to be dead links: **5%**



Sega joins nations to meet Dreamcast demand

DC goes to Sea



Japan: To mark the launch of its odd-in-the-head fish-bloke game, *Seaman*, in style, Sega has manufactured a limited run of translucent Dreamcast consoles and accessories. On July 29, Japanese gamers were able to hand over ¥34,800 (approx. £180) for a special pack including the game, console, joypad, dedicated VMS unit, microphone system, and music CD featuring collaborations with Transglobal Underground.

There were only 500 made, however, so if you're somehow able to get your hands on one, you'll be the owner of something guaranteed to escalate in value and become a true collector's item in coming years.



Sega's recent Japanese marketing tactic, which saw the Dreamcast retail price slashed from ¥29,800 (£150) to ¥19,900 (£100) was allied to a typically comical TV ad depicting workers of myriad nationality hard at work at the company's Taiwanese production facility. The wags.

Discovered: fattest Pac-Man ever

US: Proving there are no lengths to which people won't go when obsession strikes, **Billy Mitchell**, a Fort Lauderdale hot sauce manufacturer, has finally achieved the first perfect score on a *Pac-Man* coin-op. After six hours of play, he had accumulated 3,333,360 points – the maximum possible. "I just about fell apart at the 1.9 million mark," he explained. "I suddenly realised that I had 100 boards to go."

Players from all over the world have been attempting to be the first to the prize with the rivalry between American and Canadian players being particularly intense. In May, a Canadian called Rick Fothergill fell 90 points short of the perfect score.

After completing his mission, Mitchell, who also holds the world record on *Donkey Kong*, commented, "I never have to play the darn game again."



No, it's not the second coming, simply Billy Mitchell running up the perfect score on *Pac-Man*



Plumber honoured in street ceremony

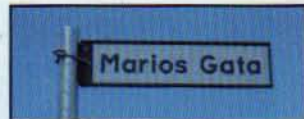
aSweden: For some strange reason, the Swedes have a place close to their hearts for Nintendo. Not only was Bergsala AB the first company in the world to get distribution rights from Kyoto, but Sweden also boasted the highest percentage sell-through of *Legend of Zelda*. And now, the small town of Kungsbacka is the proud owner of Marios Gata, or Mario Street to the rest of the NCL speaking world.

Konami horror gets graphic

UK: It may be 'too scary' to covermount on kiddies mags like *OPM*, but *Silent Hill* remains prime material for the goths and ghouls that lap up the output of the graphic novel industry. With this in mind, Konami has commissioned an official tie-in book to whet the appetites of its seriously disturbed fans. **Edge** wonders whether the extensive fog will feature for technical or atmospheric reasons this time around...



A rather odd-shaped Mario was on hand to help cut the ribbon, but he didn't seem to live up to the expectation of his fans. Could you really imagine that defeating Bowser and saving Peach?



Reward offered for cleansing sim shitty cities

UK: According to New York mayor Rudolph Giuliani, anyone who can run a *Sim City* is capable of organising the real thing, and AOL UK has decided to take up the challenge. From August 1, one sick 'Sim 3000' city per month will be downloadable for potential candidates to restore to urban bliss. These 'Malurbs', as AOL seems to like calling them, will suffer from symptoms such as pollution, traffic congestion and homelessness. The overall winner will have his or her expenses paid to either run for mayor of London or as an MP in the next election. But the competition will be stiff. Ken Livingstone has already signed up. Can Jeffrey Archer be far behind?



It's Tony Blair's worst nightmare: Ken Livingstone proving he's the best mayor for London by solving the problems of *Sim City*'s Malurbs





**TRICKY
Juxtapose
(Island)**

If living in Bristol gave Tricky the characteristic sound that burst out of 'Maxinquaye', his years in the US have finally born fruit on 'Juxtapose'. This is the closest he's come to making an urban hip hop record, as proved by his collaborations with DJ Muggs of Cypress Hill and Ruff Ryders' Grease. Fast rapping and slow beats abound, with the likes of 'Hot Like Sauna' which showcases his latest female vocalist, Kioka, demonstrating the aggressive nature of the album. He's always been in your face, but this time, Tricky's there for all the right reasons.



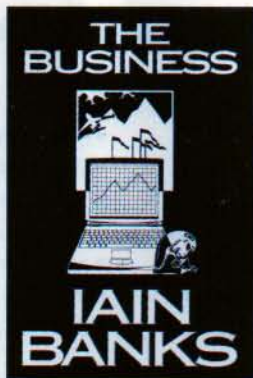
**THE WEBB BROTHERS
Beyond The Biosphere
(WEA)**

Were they just another US band touting a brand of psychedelically-tinged rock, it's unlikely The Webb Brothers would make much of an impact. Thankfully, though, as the sons of legendary tunesmith Jimmy Webb they know a thing or two about songwriting. A spaced-out mix of powerchords and twin-part vocals, this record is a beautifully poised piece of work. Delicate ballads are intertwined around blustering wig-outs. Conceptual pop has seldom sounded so good.



**VARIOUS ARTISTS
Osmosis
(Leaf)**

One of countless small labels, South London's Leaf is one of the less prominent havens of weird electronica, but this 14-track sampler of upcoming releases demonstrates that the unknown can be intriguing. The ethos of the label is best summed up by the name of one featured group, A Small Good Thing, even if the strongest songs are from relatively higher profile artists such as The Sons of Silence and Four Tet, a solo offshoot of überkids Fridge.



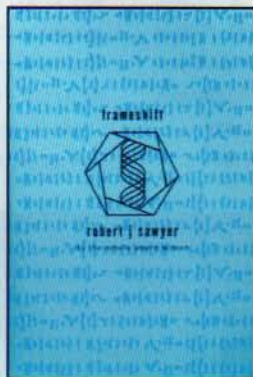
Author: **Iain Banks**
Publisher: **Little, Brown and Company**
ISBN: **0 316 64844 2**

THE BUSINESS

It's a measure of the changing nature of the world that an author with the leftfield status of Iain Banks has decided to grapple the hyper-environment that is the modern hi-tech company. Where national governments once controlled the flow of commerce, many of the fundamental decisions of the 21st century will be dictated by the new-wave corporations. Banks' metaphor for these organisations is The Business. With roots stretching back further than the Roman Empire and the stated goal of buying a small country to gain a seat at the UN, its shadowy dealings will encourage the whacked-out theories of every conspiracy freak.

But strangely for Banks, this morality tale of bad men in fine suits has such a gentle, and even obvious, conclusion that you wonder why he bothered. Little of his usual dark atmosphere is evident. Instead a pragmatic romance blossoms between the book's hardbitch heroine Kate Telman and a man she doesn't love. Another strange move is the decision to place the book in current history, with recent events such as Hurricane Mitch peppering the timeline. More nagging is the namedropping of lame bands, though: where Brett Easton Ellis goes for the Aphex Twin, Banks replies with the likes of Sheryl Crow.

This is not Banks at his best. *The Business* reads as if publication was rushed before the events mentioned faded from memory, which could well be its fate too.

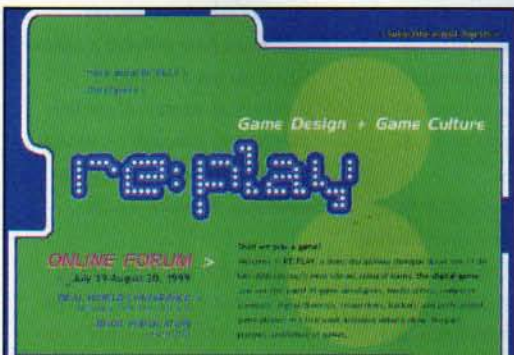


Author: **Robert J Sawyer**
Publisher: **Voyager**
ISBN: **0 00 648520 8**

FRAMESHIFT

If the microchip heralded the start of the information age, the next big jump forward will be kickstarted by the use of genetic information. With the public just waking up to the possible implications of GM food, Robert Sawyer has taken this one stage further, looking at the repercussions on our individual genetic make-up. Perhaps the most sensitive subject will be the impact of genetic knowledge in the medical profession. At the moment everyone is treated equally, as if diseases are random events. However, many conditions are controlled to some extent by our genetic make-up. *Frameshift* is an ambitious attempt to mix these possibilities with the resulting change in personal responsibility, the science of the Human Genome Project and the evil of the Holocaust into one slim sci-fi volume.

Pierre Tardivel is a geneticist, with a personal interest in his work – he knows he has a 50 per cent chance of developing a fatal hereditary disorder. After taking out medical insurance, however, an attempt is made on his life. Further investigation uncovers a mysterious neo-nazi organisation targeting people with genetic conditions. From then on in things become increasingly unrealistic, with the emergence of a nazi war criminal, the in-vitro fertilisation of a woman with a Neanderthal foetus, and the discovery of a mind-reading gene. But, to his credit, Sawyer manages to hold the plot together with a certain amount of audacity. And while it is throwaway, *Frameshift* will at least take up some enjoyable hours of beach reading this summer.



INTERNET

Site: [Re:play](http://www.eyebem.org/replay/)
URL: www.eyebem.org/replay/

Although its online forum is already half-way complete, RE:PLAY's massively multiplayer dialogue, majoring on the more intellectual aspects of gaming, is a welcome departure from the usual level of debate these events can encourage. The first module, 'Games as Structure' has covered such topics as 'Algorithmic and Instantial Games' and 'Anticipating the Play of the Game'. Panelists like Marc LeBlanc, involved with *Thief: The Dark Project*, set the tone of debate, and members of the great unwashed are encouraged to add their thoughts, which are modulated and posted 24 hours later. The last two sessions, entitled 'Games as Narrative' and 'Games as Exchange', should be worth getting to grips with.



VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: LETTERS, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

Just a small email regarding your 'Playing the Game' supplement [E73] – which, overall was great. However, there was just one little thing wrong with its contents, in the game artist and college section.

I study animation in Wales at the Glamorgan Centre for Art and Design Tech, or GCADT. This course is structured around timing, traditional animation values and life drawing. The industry, on the whole, prefers a candidate to have timing skills rather than computer skills. Evidence of this is our large percentage of graduate employment with Rare and Acclaim. I specialise in 3D Max but a proportion of my folio is traditional 2D. Many graduates study 2D, and everyone who applied to Rare was accepted.

Your information seemed biased towards 'If you can use a 3D package, then great – sod your timing and design skills'. I just thought that you overlooked some key elements in animation.

Damon Tasker,
via email

Fair point. But a flair with 2D imagery was considered a given.

I feel I must write to you about the fascination with multiplayer games, not just within your magazine but with the games industry as a whole. What is all this hype about? Have any of you ever tried getting a game via a dedicated Internet server? I am knocking on the door to my 30s now and as such I am not new to the world of computers or videogames, having started off with a ZX81 and on and on! However, I am new to the world of Internet multiplayer gaming, and all it has done is alienate me from

continuing along this path for the time being.

My gripe being, having played a lot of games to death in singleplayer mode and subsequently bored of them, it was time to unleash some new life into my investment. It was

'All I ask of game developers is to **make multiplayer access easy** so that people like me can just drop in and play, and then **learn and get possessed** by the artificial world in which a lot of today's youth reside in'

time I tackled some real opposition in the form of intelligent (or at least self-aware) competition. So off we go: install a game server connection – Mplayer in my case – wade through all the upgrades, file

a gang, everyone has made up childish names, and the new kid on the block is left out.

After ages of begging I finally get a game of one-on-one and it's fantastic – a damn sight better than a crap AI routine. But the hassle and

wait to find a sympathetic player is just not worth it. I want to click and play my games, not end up trying to be part of a clique.

Mechcommander was not the only game I tried in multiplayer –



Closed doors? Paul Davidson bemoans the accessibility of multiplayer *Quake* sessions

downloads, and patches, etc, just so the game is now compatible, and log on to the player zone for *Mechcommander*, and this is where it all stops: What clan are you in? What rank are you? Do you Mod? Have you the maps?

What the hell? Try getting a game. Not on your life – everybody knows everyone, everyone is part of

after some hesitation I tried the *Quake II server* (and yes, I did know *Quakers* take it very seriously!) but as you all probably know, it was worse – a lot worse.

Time to give up and go to bed! After three hours on the Net fiddling and farting around, two games of ten minutes each was just not worth it. And yes, I did lose – to a

15-year-old kid, just to add insult to injury!

All I ask of game developers is to make multiplayer access easy so that people like me can just drop in and play, and then learn and get possessed by the artificial world in which a lot of today's youth reside in. It is scary out there on the Net. Make it easy, guys, and we will play, but until then...

Paul Davidson,
via email

Concerning Sega's 'rebirth', my friend has experienced premature wear of the shoulder buttons on his Dreamcast pad. After opening the pad I was horrified to find the shoulder button unit actually broke from the hinges it was supported on. This again occurred on his other pad. As both of us had a good experience of still-operational controllers from various consoles past and present, this seems to be a step backwards for Sega. From gamer to funseeker we are as hamfisted as any other person, and it will be a flaw if this is repeated once the Dreamcast touches western shores. It will be a pity for such a strong console to hampered by weak controls.

Sam,
via email

Some of **Edge's** Dreamcast controllers have suffered a similar fate. Sega has made slight redesigns to western controllers (see News), although it's still too early to tell whether or not the new units are more durable.

Thought you might like to know that, thanks to **Edge**, I am now £140 poorer, but much

happier. In the 18 months or so that I've been reading your magazine, you've never let up on your quest to have the whole of the world playing on Nintendo machines and I finally succumbed. I didn't think *Mario* would be that special, nor *Banjo-Kazooie*. I didn't believe *GoldenEye* would cut it in a post-*Half-Life* world. I didn't believe my cutting-edge-PC-owning self could stand looking at low-res, cartoony visuals. How wrong I was. I'm utterly captivated by *Mario* and *Banjo* and loving *GoldenEye* as much as *Half-Life*. It's not as if I'm going to stop buying PC games, especially with the likes of *Outcast*, *Kingpin* and *Anachronox* on their way, but the thought of being able to play the legendary *Zelda* and then the potential joys of *Jet Force Gemini*, *Donkey Kong 64* and *Perfect Dark* later in the year make me feel like I've bought more than a piece of hardware, more a box of magic. I now treat *Edge* even more religiously than previously, and take your word as gospel.

The downside to this is that I am severely worried about my inability to resist buying a Dreamcast this September, mainly for the chance to play *Power Stone* and *Sonic Adventure*, and maybe even *Shenmue*. I've got the console bug now. It's only £50 more than I just paid for a new TNT2 graphics card, but if Sega are successful at launch, there'll be lots of games next year to buy. More money. Then there's Dolphin for more Nintendo/Rare goodness, and PSX2 for SquareSoft, Namco and Capcom games...

It's endless and expensive, and it's scary at times when you add it up, but, as Leo Coulson pointed out in your last issue, think how much

people spend on smoking, eating, clothes, drinking, records, etc. If only we didn't have to spend eight hours a day doing things we hate to pay for these digital toys we love...

**Colin Harrison,
West Midlands**

P.S. Great *QIII: Arena* article. John Carmack should be cloned, along with Miyamoto and Molyneux, and then perhaps we wouldn't have to endure lazy *Tomb Raider* sequels and pointless *Wipeout* updates.

Recent months have seen me waiting in great anticipation for my copy of *Edge* to arrive, in order that I might continue to follow 'the great debate' which takes place within the pages of my favourite magazine. Each issue the comments concerning review scores become more and more amusing, with readers ranting on and on about the definitions of 'average' and the best way to review games. Thankfully, in E72, Nick Ferguson put forward the intelligent idea of a word-only

'I am severely worried about my inability to resist buying a Dreamcast this September. I've got the console bug now. It's only £50 more than I just paid for a new TNT2 graphics card'

review – a concept which is theoretically sound, but in practice could cause even more confusion, as the 'sub-GCSE journals', as Nick puts it, get confused without the explicit system of numbers.

After months of research and studying, I believe I have come up with the answer to all of this. Instead of having only one version of *Edge*, the magazine could be tailored to the readers needs. *Edge* would have all of its readers' details

on file, telling them who likes which games, and what each person thinks of each game. That way the reviews can be rewritten for every reader, so that they comply with the readers' opinions, and no one is challenged or offended. When each person receives their copy, they know they can read it in the knowledge that their opinion will be praised throughout the issue.

After all, that's what people buy magazines for, isn't it? So that they can assure themselves that their knowledge of gaming is infallible, and that their opinion is final.

Or have I misunderstood the situation completely?

**Matthew Sital-Singh,
via email**

Thanks, Matthew. Your suggestion is being put into place at this moment.

I don't know what it is about Dreamcast but I have this really strange feeling Sega are going to win the next-next-generation wars. I recently downloaded Sega's

in its home territory and ends up being a massive success in the depthless-games-demanding western countries.

And, on top of this, with news that Square are developing *Final Fantasy IX* on PlayStation (as opposed to PS2), and that they are looking to get back with Nintendo for Project Dolphin, proves they are just as suspicious about PS2 as many of the 'technical analysts' who claim Sony can't manufacture the Emotion Engine at a half-decent price. Could Sega really go back to the glory days of the Mega Drive? With Square developing *Epic Story-Driven RPG VIII* on Project Dolphin? Deja vu, perhaps? Must be a glitch in 'The Matrix'...

**Sukolu,
via email**

I've just finished reading *Edge* 73, and maybe it's because I live in Holland, but I've just finished playing *Outcast* whereas you didn't even mention it yet in your issue. Since the game was produced in Belgium, maybe I got it before you had a chance to review it. This is all no problem as this gives me an excellent opportunity to warn you: you will feel ashamed about everything you've ever said about every other game once you've played it.

You will realise that the whole gaming industry was essentially asleep up till now. You understand what I am getting at: this is the first true game ever produced. All the others are nothing more than continuing old ones with minor adjustments (even the so-beloved *Quake III*). This game is finally a leap forward – you can see that the creators really enjoyed working on

this game and made a game they themselves would love to play, not a game they would be sure would sell well because it was a sequel to an existing one.

Although *Outcast* does demand a high-spec machine to run with smooth graphics (although the water effect is the best yet seen, even on the lowest possible machine). The graphics are not the most important highlight of the game (although it does show how tedious 3D-accelerated games have become, with just prettier textures on a dull flat surface). The AI is simply groundbreaking – I felt ashamed ever having wanted to play a game like *Unreal*, *Quake* or... well, they're all the same. All the



previous claims of having AI in their games at all were ludicrous. It is ridiculous that even in E73 *Quake III* is praised, where actually we're all still playing *Wolfenstein 3D*. The worst of all is that we all still put up with it by buying the games.

Praise Appeal for their (successful) effort to truly immerse the player in a game. The warning from this game is: you will never want to play any other game in existence today; you will only want ones as equally brilliant as this one.

I can only hope that this game will sell millions and will encourage

others to make similar truly innovative games (and not just *Outcast 2*).

Michiel,
via email

Hold on, Michiel... You work for Infogrames, don't you?

Reading the news in E74, I saw that Nintendo is working really hard with IBM to minimise piracy. This move, if successful, could make less people buy the new machine in countries where piracy is rife! Sounds crazy? Not completely. If Nintendo doesn't sell so many Dolphins, developers won't make games for it; if games are thin on the ground – especially big next-generation sequels – what right-

'It has come to my mind that there's **one thing** that Sony has brought **into the videogaming community** which makes games not special any more – and that's **the casual gamer**'

minded videogamer will buy it?

Why do you think that Sony won the first round?

This is, as you know, a world market; publishers and distributors are huge now and want a slice of that market. They must know that the reason that the PlayStation is big is down to piracy. Look at ten years ago: would the Amiga and ST have been so popular if you didn't 'know' someone? Of course not! They would have simply bridged a gap in the market until the technology of PCs and Macs improved to the same level.

If Nintendo leave piracy problems up to greedy developers, it would be successful. Why? I'll tell you why: if it's easy to get games for cheap, people will buy the machine.

If the installed user base is really high, everybody will want to make games for it, telling game programmers to try and prevent piracy at the software level, then take their chances. I mean, despite piracy, has Sony's machine failed?

This obscure fact could kill all chances of Nintendo winning. For there to be winners, there have to be losers. And in this case one particular loser could be wearing a red hat and blue dungarees...

Andrew Mitchell,
via email

Gah.

By spending a couple of years working for Electronics Boutique, it has come to my mind

nine out of ten would say that they own a PlayStation.

I know that 95 per cent of PlayStation owners in the UK have probably never even heard of a Neo-Geo, and that's because they're not hardcore gamers, they're all casual gamers. Most young PlayStation owners are so badly brainwashed that they think *Star Wars Trilogy* and *House of the Dead 2* are coming on the PlayStation.

Core Design can carry on making *Tomb Raiders* – they don't have to worry if they run out of ideas because they know that these idiot PlayStation owners will buy them and Sony will be laughing all the way to the bank.

The same goes for EA – they can carry on releasing ten *FIFA* titles a year and they'll all be bought by soccer fans. People who play real soccer games are the people who play *ISS*, not *FIFA*.

Sony doesn't care how crap games are for the PlayStation. They seem to be concentrating on quantity than quality, and that's why we get very few great games like *Gran Turismo*, *Tekken 3* and *Metal Gear Solid*.

Let's hope that Sega will change this when they release the Dreamcast here. Otherwise, they'll have to make the most out of it by getting EA and Core Design to make pathetic games exclusively for their machine. Then those casual gamers will have no choice but to buy a Dreamcast.

Trung On,
via email

But without the casual gamer, the funding wouldn't be there to make more classics like the examples you mention. Give the poor, deluded fellows a break.

Next month.



ISSUE SEVENTY-SIX

ON SALE SEPTEMBER 6



